

**TRAINING PROGRAMME FOR THE TEACHER  
EDUCATORS FROM IASE, GANDHI VIDYA MANDIR,  
SARDARSHAHR, RAJASTHAN**

**(May 20-31, 2002)**

**A Report**



**Department of Teacher Education and Extension  
National Council of Educational Research and Training  
Sri Aurobindo Marg, New Delhi-16  
2002**



## **Programme Team**

**Prof. G.K. Lehri, Head of Department**

**Prof. Mamta Agrawal, Programme Coordinator**

**Dr. S.K.Yadav**

**Dr. Saroj Pandey**

**Dr. Raj Rani**

**Dr. Pranati Panda**



## **Foreword**

Following the mandate of the National Policy on Education, (1986), the Institutes of Advanced Studies in Education have been established in the country under the centrally sponsored scheme of restructuring and reorganization of teacher education. The major goal of these institutions is to offer and bring about qualitative improvement in the pre-service courses for secondary teachers. Besides, they are also expected to play a crucial role in education of teacher educators for elementary education and promote excellence in elementary education. The NCERT provides academic support to these institutions by way of strengthening the capacity of their faculty to undertake research, training, development and extension programmes so that the IASEs may develop as institutes of excellence for school education.

The Department of Teacher Education and Extension has been regularly organizing professional development programmes for faculty members of IASEs which centre around their multifaceted needs. However, for the first time, the department has organized a programme exclusively addressing the specific training needs of IASE, Gandhi Vidhya Mandir, Sardarshahr, Rajasthan which is not only founded on the ideals of Gandhiji but is also functioning in a unique rural cultural setting. It is hoped that the training programme would help this institution in further concretizing the Gandhian philosophy in their future endeavour. This training programme indeed has provided rich learning experience not only to the faculty members of IASE but also the Department of Teacher Education and Extension.

I appreciate the sincere efforts made by the Programme Coordinator, Prof. Mamta Agrawal and the faculty of Department of Teacher Education and Extension for making the programme a success.

New Delhi  
September, 2002

G.K. Lehari  
Head  
Department of Teacher  
Education & Extension



## **PREFACE**

The need for in-service education and training of teacher educators and teachers as a means of their continuing professional development is well recognized. Strengthening the professional competencies of teacher educators of IASE faculty is a regular activity of the Department of Teacher Education and Extension

In this context, the Department organized a training programme for the faculty of IASE, Gandhi Vidya Mandir, Sardarshahr, Rajasthan from 20-31 May, 2002. It was a tailor made programme keeping in view the specific needs of the faculty of Gandhi Vidya Mandir. The course content included interventions on emerging issues and concerns of teacher education and school education, research in education, information and communication technology in school education, evaluation, school education and teaching strategies and functions of universities. It is hoped that the training programme would help the faculty of the IASE, Gandhi Vidya Mandir in making their future programmes and research more contextual and relevant to the present day needs.

I appreciate the sincere efforts made by the programme team members Dr. S.K. Yadav, Dr. Saroj Pandey, Dr. Raj Rani and Dr. Pranati Panda to ensure smooth organization of the programme.

New Delhi  
September, 2002

Mamta Agrawal  
Professor  
Department of Teacher  
Education & Extension





## CONTENT

<b>Foreword</b>	
<b>Preface</b>	
1.	<b>Introduction</b> 1-6
2	<b>Proceedings of the programme</b> 7-87
2.1	Inaugural Address 7-8
2.2	Special Lecture: Dr. L.M.Singhvi 9-11
2.3	NCERT and Its Constituent Units 12-14
2.4	<b>Thematic Sessions</b>
2.4.1.	Educational Change: Global Context 15-18
2.4.2.	School Education and Teaching Strategies 19-31
2.4.3.	Evaluation in Schools 32-36
2.4.4.	Emerging Issues and Concerns of Education 37-48
2.4.5.	Research in Education 49-55
2.4.6.	Teacher and Teacher Education 56-76
2.4.7.	Educational Technology: Concept and Application 77-79
2.4.8.	Information and Communication Technology in School Education 80
2.4.9.	Functions of Universities 81-83
2.5	Educational Visits 84-85
2.6	Valedictory Session 86-87
<b>Appendices</b>	
i)	List of Participants
ii)	List of Resource Persons
iii)	Programme Schedule



## **1. Introduction**

The National Policy on Education (1986) and its Programme of Action (1992) envisaged a centrally sponsored scheme to restructure and reorganize teacher education. The scheme was taken up in 1987 by the Government of India to create a viable institutional infrastructure, academic and technical resource base for orientation, training and continuous upgradation of knowledge, competence and pedagogical skills of school teachers in the country. The scheme envisaged strengthening of 250 Colleges of Teacher Education (CTEs) and development of 50 of them as Institutes of Advanced Studies in Education (IASEs).

As a comprehensive institution of teacher education, the main functions of IASE are related to pre-service and in-service teacher training, research, development, extension, documentation and consultancy in the area of school education, teacher education, educational technology and information technology. The IASEs are also expected to provide academic and resource support to DIETs and CTEs for the qualitative improvement of teacher education. Though the IASEs offer pre-service courses for secondary teachers, they are also expected to play a role in education of teacher educators for elementary education in order to bring in qualitative improvement in elementary education.

At present, there are 37 IASEs in the country. The NCERT has been entrusted with the responsibility of capacity building and strengthening of IASEs along with other institutions established under the centrally sponsored scheme. Consequently, the Department of Teacher Education and Extension, NCERT organizes training programmes for the capacity building of IASE faculty on a regular basis. This programme was one such programme but was unique in nature as

it was organized exclusively for the faculty of IASE, Gandhi Vidya Mandir, Sardarshahr Rajasthan.

Gandhi Vidya Mandir is a special institution established in a rural cultural setting of Sardarshahr, Rajasthan. It has been striving to promote the Gandhian ideals of 'Ahimsa' and 'Sarvodaya' through its educational programmes and co-curricular activities. The IASE, Gandhi Vidya Mandir facilitates teachers' training at all stages of school education with a view to bringing about qualitative improvement in teaching at all levels, through specific in-service training courses devised by it.

### **1.1 Objectives of the Programme**

1. To sensitize the teacher educators about the emerging issues and concerns in the area of school education and teacher education.
2. To strengthen their capacity to formulate programmes for teacher educators and also to encourage them to take up innovative programmes.
3. To strengthen their capacity to undertake research and training programmes.
4. To develop IASEs as institutes of excellence for elementary and secondary education.

### **1.2 Course Content**

The course content of the present programme had been designed keeping in view the specific needs of the trainees. The course content included following themes and topics.

#### **1.2.1 Educational Change in Global Context**

### 1.2.2. School Education and Teaching Strategies

- (i) Development of Curriculum Framework for School Education
- (ii) Elementary Education: Status, Problems and Issues
- (iii) Culture Specific Pedagogy
- (iv) Constructivist Approach of Teaching and Learning
- (v) Teaching of Science and Technology
- (vi) Teaching Communication Skills

### 1.2.3. Evaluation in Schools

- (i) Continuous and Comprehensive Evaluation
- (ii) Grading System

### 1.2.4. Emerging Issues and Concerns of Education

- (i) Value Education
- (ii) Inclusive Education: Issues and Concerns
- (iii) Human Rights and Peace Education in Schools
- (iv) Adolescence Education
- (v) Girls' Education and Women's Empowerment

### 1.2.5 Research and Education

- (i) Trends in Educational Research
- (ii) Action Research: Need and Concept
- (iii) Qualitative Research in Education

### 1.2.6 Teacher and Teacher Education

- (i) Emerging Issues and Concerns in Teacher Education
- (ii) Teacher Education Curriculum

- (iii) Teaching skills
- (iv) School Experience Programme
- (v) Professional Development of Teachers: The Key to Quality Teacher Education
- (vi) Need Based In-service Programmes
- (vii) Organizing In-service Training Programme
- (viii) Monitoring and Evaluation of In-service Programmes
- (ix) Innovations in School and Teacher Education
- (x) Not by Competencies Alone

#### 1.2.7 Educational Technology

- (i) Educational Technology in School Education
- (ii) Learning through ETV programmes produced by CIET

#### 1.2.8 Information and Communication Technology in School Education

#### 1.2.9 Functions of University

### 1.3 Participants

Twenty-seven faculty members including Principal and Dean, Professors, Readers, Lecturers and Teachers from the Institute of Advanced Studies in Education, Gandhi Vidya Mandir, Sardarshahr (Rajasthan) participated in this training programme. The list of participants is given in Appendix-i.

## **1.4 Resource Faculty**

The resource persons were mostly drawn from the NCERT faculty. Some renowned educationists were also invited. The list of resource persons is given in Appendix- ii

## **1.5 Programme Schedule**

The programme was of twelve days duration i.e. from 20<sup>th</sup> May to 31<sup>st</sup> May, 2002. The programme schedule (Time Table) covering various themes is given in Appendix-iii.

## **1.6 Course Methodology**

The training methodology included various interactive approaches like lecture cum discussion, practical activities, group work, assignments etc. A visit to CIET studios was arranged to observe the actual preparation of educational programmes for Television & Radio. The participants visited the Publication Department and National Resource Centre for Value Education.

The relevant reading materials in the form of handouts were distributed to the participants before each thematic session. The documents like National Curriculum Framework for School Education, Grading in Schools and the resource package on Adolescence Education were also made available to the participants.

The programme had an inbuilt mechanism of periodic monitoring and evaluation by the participants.

## **1.7 Assignments and Presentations**

The participants were required to accomplish one of the following assignments as group activity.

1. Teacher education and future directions
2. Role of teacher in today's context
3. Reducing Curriculum Load
4. Developing educational and social leadership among teachers

The presentations were made by the participants followed by interaction with the faculty members.



## **2. Proceedings of the Programme**

### **2.1. Inaugural Address**

The Inaugural session of the training programme for the teacher educators of Gandhi Vidya Mandir, Sardarshahr was held on 20th May, 2002 at NIE Campus, NCERT, New Delhi. The programme was inaugurated by Prof. J.S. Rajput, Director, NCERT. While addressing the participants Prof. Rajput mentioned the uniqueness of this training programme and stated that this was the first time that the NCERT was organising a specific programme for one institution. Reflecting on the Gandhian philosophy of education he highlighted that the basic foundation of Gandhi Vidya Mandir was laid on this philosophy. In this context, he stressed that the association of Gandhi's name with the institution points towards the greater responsibility on the shoulders of the institution for inculcating Gandhian values and ideals of truth, love, non-violence, honesty, fearlessness and equity etc. among students. Gandhiji stressed on strong institution and community relationship and the rural back- drop of Gandhi Vidya Mandir reflected its efforts to put these ideas into practice. However he stressed that mere rural setting of the institution is not enough to bring it close to the community. The institution is expected to make conscious efforts to win the confidence of the community and establish close linkage with it. Prof. Rajput made a reference to the teacher training institution of Sanosara where students worked for eighteen to twenty hours helping flood affected people in Surat. Citing another example of Gujarat Vidyapeeth which was established by Mahatma Gandhi in 1920 and is a living example of preparing teachers in the backdrop of rural life-style, Prof. Rajput highlighted the importance of serving the community as an integral part of the educational process.

Addressing the present scenario of education, which is in a state of transition, Prof. Rajput highlighted the growing gap between the demands of real life situations and the knowledge imparted in our educational institutions. The unrelatedness of education with employment opportunities and problems of life has shaken the faith of people in the present educational system. This faith needs to be reinstated. Another major source of distress is the influence of materialistic western culture which has overshadowed the Indian spiritual and moral fabric resulting in conflict between the two. He made a reference to Delors report in the context of the conflict between the materialistic and spiritual pursuits.

Reflecting his views on global deterioration of human values, he stressed on the need for value based preparation for life through the process of education. Education should be able to teach righteous conduct to students. The school curriculum should develop values such as punctuality, equality, self-control, sense of duty and we-feeling among students. Students should be made aware of the similarities of different religions and should be taught to respect diversities. Such knowledge may help in reducing misconceptions about various religions by bringing diverse cultures together. He cited the examples of a number of educational institutions, which are contributing significantly in inculcating human values among the younger generation in this age of uncertainty. He also highlighted the changing world scenario and changes in the school curriculum to meet the needs of the changing society.

Prof. Rajput formally inaugurated the programme by reminding the participants of their changing roles and responsibilities in this fast changing world. Quoting a phrase, "Academic arrogance causes disabling ignorance" he advised participants to be humble in their pursuit of knowledge and be life long learners.

## **2.2. Special Lecture: Dr. L.M. Singhvi**

Dr. L.M.Singhvi, the Chancellor of Gandhi Vidya Mandir, visited the NCERT on 28<sup>th</sup> May, 2002. While addressing the participants of the training programme Dr. Singhvi expressed his happiness to be interacting with faculty members of Gandhi Vidya Mandir as he had a very long and strong association with Sardarshahr since 1956. Further, he highlighted that many great personalities were also associated with Gandhi Vidya Mandir since its inception. The first President of India Late Dr. Rajendra Prasad had visited the institute and our present Prime Minister had also served as the Chancellor of this institute. Stating the reasons for his association with this institute, he said that the foremost amongst them was that this institute was founded on Gandhian philosophy and ideology. Dr. Singhvi mentioned that being a strong believer and supporter of Gandhian philosophy, he had tried to disseminate Gandhian ideals even during his stay in England and continued to do so in other endeavours. Highlighting Gandhiji's contributions, Dr. Singhvi stated that Gandhiji had contributed significantly in keeping India united and had provided a unique identity to the nation on the world map. He had strongly emphasized on education and believed that no development of society was possible without the development of human beings living therein.

There is a popular saying that 'child is the father of man'. Aristotle said 'a statue is there in all the pieces of marble but it is the responsibility of teacher to carve it in a definite shape.' Therefore, the teacher has a serious and very difficult responsibility to perform. In this context Dr. Singhvi congratulated the NCERT under the able leadership of Prof. Rajput for bringing in a new era in the field of education. Dr. Singhvi said that it was unfortunate that people tried to throttle every new effort, but a time had come when we would have to introspect on the

aims and objectives of education, its content and process and the role of teacher etc. Further he stressed that we should be constructive and positive and try to refine the system for the full development of the personality of the child the way Mahatma Gandhi had visualized. Mahatma Gandhi had strong conviction that it was very easy to destroy anything but it was extremely difficult to construct. He, therefore, emphasized on the constructive role of education. He synthesized the individual and social aims of education and believed that a fusion of 'self-realization' and 'social service' made the man complete. He firmly believed that our educational system should be deeply rooted in our own philosophy of life, traditions and cultures. Only such a system could make a child a sensitive human being and help in the full development of his/her personality. Therefore, he stressed on a close integration between the school and community. His scheme of basic education developed a keen sense of personal worth, dignity, efficiency and self-reliance among students along with inculcating the desire for social service and cooperation.

Dr. Singhvi, while drawing the attention of participants towards our great ancient traditions and philosophy mentioned that Vedas had very comprehensive and broad outlook of life and a time had come now to adopt the same broad outlook of life. He stressed that '*Manisha*' develops '*Mansikta* (mentality)'. We have to determine now what contributions India can make to give a direction to world's '*Manisha*'. We should strive for higher goals while standing firmly on the ground realizing our limitations because a person who does not know his limits can never reach the heights. A time has come now when the education has to search for new goals and contribute in the reconstruction of India. NCERT is an institution, which has contributed significantly in the reconstruction of the country through its curriculum. Curriculum is a powerful instrument through which we can bring change in the society; but teacher is a more powerful instrument as he/she transacts the

curriculum in the class moulding the tender minds of young learners. Teachers are constant source of motivation for students and leave their lifelong impression in the minds of students. Mahatma Buddha said '*Atma Deepo Bhav*' i.e you have to enlighten yourself first in order to enlighten the society. Further, Dr. Singhvi highlighted two things - '*Pragya* (intellect) and '*Karuna*' (compassion) as these are the only indicators of civilized and educated person. He concluded his address by praying to god for the prosperity and development of Gandhi Vidya Mandir and hoped that it would continue to serve and follow the ideals of Gandhiji and would not deviate from its basic philosophy.

### **2.3. NCERT and Its Constituent Units**

The participants were given an overview of the NCERT and its constituent units and the roles and functions of the NCERT were discussed.

The NCERT was established in 1961 to advise and assist the Government of India in matters relating to education particularly school education.

The main functions of NCERT include

- Curriculum and textual material development
- Research- particularly policy research
- Training of teachers/teacher educators and other educational functionaries
- Extension
- Clearing house

NCERT has the following constituents

- National Institute of Education (NIE), New Delhi
- Central Institute of Educational Technology (CIET), New Delhi
- Pandit Sundarlal Sharma Central Institute of Vocational Education (PSSCIVE), Bhopal
- Regional Institutes of Education (RIEs) at Ajmer, Bhopal, Bhubaneswar, Mysore and Shillong.

The NIE has the following departments/Units

- Department of Elementary Education (DEE)
- Department of Education of Groups with Special Needs (DEGSN)
- Department of Women's Studies (DWS)

- Department of Education in Science and Mathematics (DESM)
- Department of Education in Social Sciences and Humanities (DESSH)
- Department of Teacher Education and Extension (DTEE)
- Department of Educational Psychology and Foundations of Education (DEPFE)
- Department of Educational Measurement and Evaluation (DEME)
- Department of Educational Survey and Data Processing (DESDP)
- Department of Educational Research and Policy Perspective (DERPP)
- Department of Computer Education and Technological Aids (DCETA)
- Planning, Programming Monitoring and Evaluation Division (PPMED)
- International Relations Division (IRD)
- Publication Division (PD)
- Division of Library Documentation and Information (DLDI)

Regional Institutes of Education (RIEs) function as pace-setting institutions in pre-service and in-service education of teachers, carry out research and developmental studies in school and teacher education, and conduct training and extension activities for qualitative improvement in school education. Each RIE has a laboratory school i.e. Demonstration Multipurpose School to experiment pedagogical research and developmental activities related to school effectiveness.

The Central Institute of Educational Technology (CIET) is a premier Institute in educational technology located in the Chacha Nehru Bhawan in the NCERT Campus, New Delhi. Its main activities include production

of audio/video programmes, 16 mm films and low cost audio visual material, training to teacher educators and other personnel in educational technology, media planning, script writing, programme production, carrying out research and evaluation of its audio/Video programmes and materials. The CIET develops programmes, which support the activities of other constituent of NCERT.

CIET functions through various divisions, which are as follows:

1. Media Resource and Training Division
2. Distance Education Programme and Scripting
3. Graphics and Multimedia
4. Research Evaluation Studies and Dissemination
5. Educational Television
6. Educational Audio and Radio Transmission
7. Capsuling and Transmission
8. Technical Planning, Operation and Maintenance
9. Secretariat, Administration and Accounts.

Pandit Sundarlal Sharma Central Institute of Vocational Education is the national apex research and development institution in the field of vocational education. An important function of the institute is to oversee the implementation of vocational education programmes launched by MHRD, Government of India. The PSSCIVE develops curriculum, provides teacher training and extension support and conducts research in the area of vocational education through its various programmes and activities.



## **2.4 THEMATIC SESSIONS**



### **2.4.1 Educational Change - Global Context**

Change is essential yet certain skills and competencies are required to bring desirable changes in the existing system. To bring desirable change a thorough understanding of the context and the change to be brought about is necessary. However no change can be successful unless its managers are fully prepared and willing to bring it. In the decade of 1950-1960, for instance, two significant changes took place in our country i.e. green revolution, which resulted in substantial increase in the production of food grains; and eradication of Small Pox.

These changes were possible only because every one made significant efforts for these changes.

Any change has the following characteristics:

- Continuity
- Speed/pace
- Efficient leader who can lead the process of change
- Willingness to change.

The change is the process which is gradual, natural and future oriented.

In 20th century the most significant change in the field of education was the concern and the efforts made for universalization of elementary education. In this direction, a conference on "Education for All" was organized in 1990 in Jomtien, Thailand. In this Conference, developed countries decided to collaborate with developing countries to provide elementary education to all children. Consequently educational changes took place in many countries. The

process of change in the field of education is slow and it is much slower in the field of teacher education. For example, during last fifty years, not much change has been made in the format of preparing lesson plans for practice teaching. In the post independence era, India has witnessed significant educational changes because of its changing priorities from one decade to another. These are as follows.

***Education Change : India***

<i>Decade</i>	<i>Change</i>
1950-60	Access, enrolment
1960-70	Reducing wastage, stagnation, dropout
1970-80	Enhancing achievement
1980-90	Quality of education, community involvement
1990-2000	International cooperation for providing education for all, decentralized planning of primary education, ownership of primary education by local government (Panchayat).

In the global context, also simultaneous changes have been taking place. These are as follows.

***Educational Change: World***

<i>Decade</i>	<i>Change</i>
1970s'	Slow progress of education
1980s'	Documentation and analysis of success stories
1990s'	Management of educational change

No change will be successful unless its managers are fully prepared and willing to bring it.

Philip Coombs conducted a study on changes of education and concluded that the process of educational change was slow due to several reasons like

- disparities in the contexts
- attitude towards change
- clinging to conventional practices
- model developed for 'elite' applied to all
- practices could not fit the fundamentally different needs.

Major educational reforms that are taking place in the modern era are:

- \* UEE - stress on quality
- \* Alternatives to formal system
- \* Social justice, equity, equality
- \* Decentralization
- \* Parents and community participation in schooling
- \* Curriculum change and reforms
- \* Management and administration
- \* Examination and evaluation
- \* Textbooks and other material (electronic textbooks)
- \* Introduction and use of IT/ET
- \* Issues of special groups
- \* Inclusive education

These are the issues on which every country is concentrating to bring desirable changes in their educational system.

### **Change Related to Teachers**

The following have been discussed globally to bring change in the status and professionalism of teachers:

- \* Salaries, security, mobility
- \* In-service education
- \* Performance evaluation
- \* Peer group learning
- \* Working environment

### **Critical Institutional issues**

There are also certain critical institutional issues which have far reaching implications on the process of change. These are:

- \* Reorganisation, restructuring and reengineering for survival and success
- \* Increasing skill shortage
- \* Inadequacies of educational system
- \* Growth of knowledge every two-three years
- \* Increased competition
- \* Breakthroughs and advances
- \* Information and communication technology.

## **2.4.2 School Education and Teaching Strategies**

The education system in India has undergone tremendous changes during the closing decades of the bygone century. Universalisation of elementary education has been the major thrust area, for which a number of steps have been taken. The pedagogy of education has also been witnessing a paradigm shift from teacher centred approaches to child centred approaches where child is considered as constructor of knowledge. Contextuality in education is being emphasised with thrust on adopting culture specific pedagogies in teaching. These major concerns have been dealt with in this theme.

### **2.4.2.1. Development of Curriculum Framework for School Education**

Curriculum has a significant place in an educational system. Curriculum is something like a nation's constitution. Developing curriculum for education is just like preparing a plan before building a house. It is guided by the past and future expectations. The process of curriculum development is not static but it is dynamic and change oriented.

The NCERT has been involved in the process of evolving/developing National Curriculum Frameworks for School Education keeping in view the major concerns and issues before the nation. The states thereafter have the freedom to adopt or adapt these curricular guidelines.

As its first attempt the NCERT brought out 'The Curriculum for the Ten Year School- A Framework' in 1975 to give concrete shape to the resolutions of the National Policy on Education 1968. The "National

Curriculum for Elementary and Secondary Education: A Framework” brought out by the NCERT in 1988 responded to the major thrusts and recommendations of NPE 1986 and its POA. The NCERT initiated its latest venture of developing a new curriculum framework for the entire school education in 1999 by constituting a curriculum group of its own faculty members. The group developed “ National Curriculum Framework for School Education: A Discussion Document” after detailed discussion and consultation. The discussion document was then sent for comments and suggestions to educationists, teachers, experts, and various research institutions. The document was also discussed throughout the country through regional seminars and meetings. Many institutions, voluntary organizations, teacher organizations, parent teacher associations, experts and even students gave their comments and suggestions. After carefully analyzing and appropriately incorporating these suggestions and comments, the document was finalized and published as the National Curriculum Framework for School Education in November, 2000. .

The present curriculum framework covers all the stages of school education from pre-primary to the senior secondary. While the Framework responds to many societal and pedagogical changes, it remains well within the broad parameters of the NPE 1986(revised in 1992). Some of the new concerns that lay the foundation of the NCFSE are

- Education for building a cohesive society
- Strengthening National Identity and Preserving Cultural Heritage
- Integrating Indigenous Knowledge and India’s Contribution to Mankind
- Responding to the Impact of Globalization



- Meeting the Challenges of Information Communication Technology
- Linking Education with Life Skills
- Education for Value Development
- The Child as a Constructor of Knowledge
- Interface between Cognition, Emotion and Action
- Culture Specific Pedagogies
- Continuous and Comprehensive Evaluation
- Teaching Social Sciences Through Integrated Approach
- Integration of Science and Technology
- Integration of Art Education, Health and Physical Education and Work Education into the 'Art of Healthy and Productive Living' at the Primary Stage
- Bringing Mathematics closer to life at the Secondary level and setting up of a Mathematics Corner in the existing Science laboratory for practical Mathematics.

A lot of flexibility is built in the Curriculum Framework to accommodate the local contexts and variations. Besides, full trust in the teachers and their empowerment and participation in the planning, implementation and evaluation of the curriculum and development of the curricular material is being asserted for the first time.

#### **2.4.2.2. Elementary Education: Status, Problems and Issues**

At the time of Independence, India inherited an educational system that was quantitatively small with striking regional, economic and gender disparities. Subsequently, provision of free and compulsory education to all children until they complete the age of 14 years became a Directive Principle of the Constitution of India. Since then, we have made

substantial progress in the field of education. Literacy rates for both male and female have considerably increased, the number of schools and educational infrastructure have substantially grown and enrolment of children has increased tremendously. Yet, our Constitutional Directive of free and compulsory education for all children upto the age of 14 years (UEE) remained unfulfilled.

The National Policy on Education 1986 reemphasized to achieve the goal of UEE and to bring qualitative improvement in elementary education. NPE 1986 advocated decentralised micro planning of elementary education. It also stressed the need to make elementary education a joyful experience for children by making it more child-centered and activity based.

It laid special emphasis on providing access to children living in difficult circumstances and to reduce gender disparities in education.

Most of the directives of the NPE 1986 and POA (1992) were operationalized by the Union and States/UTs through various schemes and projects like Operation Blackboard, MLLs, and Total Literacy Campaigns etc.

To give concrete shape to decentralization of primary education some projects were initiated with external assistance e.g. Bihar Education Project, Mahila Samakhya, Andhra Pradesh Primary Education Project, Lok Jumbish and District Primary Education Programme (DPEP).

The DPEP was initiated in 46 districts in eight states of the country as a centrally sponsored scheme. This was a homegrown programme aimed at achieving UEE in decentralized mode with an emphasis on community participation and capacity building with the district as the unit of planning.

Recently the Government of India has launched a new scheme known as "Sarva Shiksha Abhiyan" (SSA) by incorporating all the existing schemes and programmes in elementary education sector. The

SSA was launched in a Mission Mode in partnership with states aiming at providing “education of a satisfactory quality with an emphasis on education for life to all children in the 6 to 14 years age group by 2010”.

SSA is a holistic and convergent scheme to implement UEE with a focus on district as a unit of educational planning and implementation. There will be special focus on girls, children belonging to SC/ST communities and urban slum dwellers. Adoption of incremental approach for creating school facilities, Education Guarantee Centres in unserved habitations, “Back to School Camps” for out of school children and decentralisation of planning and management through Panchayati Raj Institutions, Village Education Committees and stress on participative processes are some of the strategies framed for SSA

Some major issues related to elementary education which need to be addressed in the future are listed below:

- How is decentralization to be achieved in curriculum planning, implementation and development of materials?
- What constitutes quality education and what are the strategies that can be used for promoting this?
- How should the community be involved as ‘true partners’ in achieving UEE in terms of enrolment, retention, quality and achievement?
- How is a judicious balance to be maintained between the government and community in achieving UEE?
- What are the long term and short-term needs/requirements of teachers in providing quality education?
- What is the role of the teacher, community and administration in planning implementation and monitoring primary and upper primary education?

- How is a balance to be maintained between the formal and non-formal alternative forms of schooling (EGS & AIE)?
- How is the gender gap to be bridged between boys and girls participation in elementary education?
- How are equal educational opportunities to be provided for SC,ST and children with special educational needs?
- How is mainstreaming to be effective for children with Special Educational Needs (SEN), those going from non-formal to formal and working children?

All the above-mentioned issues and many more need to be addressed if UEE and the right to elementary education as a Fundamental Right is to be achieved in totality.

#### **2.4.2.3 Use of Culture Specific Pedagogy in Teaching**

India is a multicultural, multilingual and multireligious society. This has implications for the pedagogical approaches to be followed in different contexts. Teaching is a social and a professional activity. The ultimate goal of teaching is to bring out all round development of the child. The concept of 'Teaching' may be explained through a description of different variables involved in the process of teaching. Usually these variables may be classified as (i) Independent variable- the teacher (ii) Dependent variable- the student and (iii) Intervening variables – the content and the strategies of the presentation. There are three phases of teaching operations. These are (i) Pre-active phase (ii) Interactive Phase (iii) Post-active phase.

The use of Culture Specific Pedagogies like role playing, story telling, puppetry, dance and music have paramount importance for integrating theory and practicum in teaching- learning process.

The essence of 'Role Playing' is the involvement of participants and observers in a real life problem situation and the desire for the resolution and understanding that this involvement generates. Through role-playing students can increase their abilities to recognize their own and other people's feelings, acquire new behaviours for handling difficult situations, and improve their problem-solving skills.

Use of story telling and puppetry techniques are useful mediums of Culture Specific Pedagogy at early childhood and elementary stage of education. Story telling and Puppetry develops an appreciation for and enjoyment of literature, provides enrichment of language and joyful experiences, develops students 'listening skills' and motivates students to read.

Dance, music and art, are very much a part of customs, morals and beliefs of a culture. Folk songs and folk dances are very popular medium of Culture Specific Pedagogy. They provide insights into the interest, attitudes, values and beliefs of a particular society.

Use of community resources in Culture Specific Pedagogy enhances learning by providing students with relevant, concrete experience in their own community. Community Resources give us insight into the personal, commercial, governmental, industrial, cultural or personal workings and interactions in a community.

Simulation is defined as a role-playing in which the process of teaching is enacted in artificial situations with the objectives of developing or practicing a specific kind of teaching or communication. Simulated teaching is one of the techniques being used currently in India as well as in other countries of the world for the modification of teaching behaviour and developing skills.

#### **2.4.2.4 Constructivist Approach of Teaching and Learning**

Traditionally knowledge is viewed as objective, universal and complete, which can be transmitted from those who have acquired the knowledge to those who have not. Constructivist approach on the other hand is based on the belief that knowledge is subjective, contextual and incomplete. Therefore, it cannot be transmitted to passive learners. Learners construct knowledge by reconciliation of the new information with their prior experiences. Different theories have been proposed by Piaget, Vygotsky and Novak as to how learners construct knowledge. Although these theorists differ on some aspects of the process by which knowledge is constructed, they all agree that:

- Learning is not a receptive process but is instead an active meaning making process required to solve meaningful problems.
- New learning depends on learner's previous knowledge, which may sometimes interfere with the understanding of new information
- Learning implies the reorganization of prior conceptual schemes.
- Learning is facilitated by social interaction.
- Meaningful learning occurs within authentic learning tasks.

Considering this constructivist view of learning, the role of teacher and students also changes in a constructivist classroom. In constructivist classroom, teachers must use different forms of active learning such as cooperative learning, group work and team projects.

For constructivist teaching:

- Start with learner's prior knowledge, that is, where the learner is. Use student's range of understanding to further understanding.
- Design 'bridges' to take the learners to the desired points. This can be done through careful and targeted questioning.
- Encourage students to explore ideas themselves through self-learning.
- Design and organize situations in which ideas can be discussed without fear and ridicule.

Constructivist teaching requires change in class culture and environment. The role of teacher will change from authoritarian position to a democratic leader of the group, a guide and facilitator of knowledge construction. Students in a constructionist class are young scientists, following the same steps that a scientist follows in making new discoveries.

#### **2.4.2.5 Teaching of Science and Technology at School Level**

Science is concerned with the fundamental knowledge of our world and its environment. Teaching deals with the numerous ways and means of pressing science into human services of making or changing things for public ends.

Science is universal. It does not vary with geography of place or with economic, social or political conditions. On the other hand technology may depend upon economic, geographical, social and political conditions. While science may be considered as neutral or amoral, technology can acquire ethical, moral overtones and invite to itself levels like 'moral' or immoral, 'human or cruel'.

It is not possible to demarcate boundary and separate science and technology from each other. Science and technology are jointly responsible for improving the quality of life.

Considering the relevance of science and technology, the NCFSE brought out by the NCERT in 2000, recommended the teaching of science and technology as one of the subject areas in place of science at upper primary and secondary levels with the main aim to provide scientific and technological literacy.

In simple terms, ability to take decisions and to solve problems using suitable technology is 'technological literacy' and ability to apply scientific principles in interpreting natural phenomenon and in day-to-day happenings or events in environment or in surroundings is scientific literacy. The technological education should be able to empower learners to 'examine', 'decide', and 'select' technological solutions of contemporary issues on merit of their potentials limitations and long-term consequences etc. Technology education therefore not only develops problem solving abilities but also inculcates an element of social responsibility for using technology wisely.

Technology bridges science and society. Society had been using technology even when people were not aware of scientific development. Science and technology education usually involves inter-subject teaching. For teaching 'Science and Technology', a teacher is supposed to have a broad base of scientific knowledge. How to link technology with science is a challenging task. The pedagogical skills of teachers should therefore be improved so that they are in a position to relate science and technology using local specific examples and indigenous technology.

Science and technology teaching also requires the use of variety of locally available resources and improvised materials. A teacher should



know how concepts and processes are used in the industry, agriculture and commerce. A science and technology teacher should be encouraged to visit industries and other science and technology based establishments such as science museums, science parks, science exhibitions, science clubs, more science laboratories and local industries etc to acquaint himself/herself with the application of science and technology principles in daily life.

In order to give a comprehensive view of science and technology, adequate question of information and communication technology should be integrated with teaching of science.

#### **2.4.2.6 The Communicative Approach To Teaching Language**

The communicative/functional-notional approach to syllabus design, materials development and classroom interaction has been the center of much discussion and debate in recent years. The approach seeks to develop among learners 'communicative competence' (the ability to put language to effective practical use) as opposed to purely linguistic knowledge. If communication is the primary objective of all language use, then it should be the primary objective of all language learning programmes as well.

There is no basic conflict between communicative competence and linguistic competence. In fact, the former is a product of a combination of 'grammatical competence' and what is referred to as 'sociolinguistic competence'. Grammatical competence refers to the mastery of the grammatical rules and structures of the language. It is essential to understand the literal meaning of sentences and texts. 'Sociolinguistic competence' refers to the ability to understand the appropriateness of the social context in which utterances are produced and exchanged. It also

involves the ability to produce socially appropriate utterances. Such an ability would take into account features like social conventions, degree of intimacy/formality, status and role of speakers/listeners and the overall purpose of the utterances. It is not difficult to come across utterances that are linguistically perfect but contextually inadequate or even offensive.

It would seem that a functional approach to language teaching concerns itself with meaning and contextual appropriacy as well as with grammatical form, though the emphasis is far greater on the former. As a result, it is inclined towards fluency (sustained participation) and not merely towards accuracy (grammatical correctness). Using language in socially appropriate and well defined contexts is more important than doing exercises on language. Likewise, learner participation in classroom interaction plays more dominant role than teacher-centred instruction. The teacher is viewed as a facilitator of learning and the learner becomes an active participant in activities involving discussion, role play and sorting out differences of opinions in academic matters.

Materials produced on the basis of the communicative criteria list language functions and corresponding grammatical forms for the performance of those functions. Topic-based pieces, dialogues and other simplified texts are then followed by tasks and activities in place of the conventional types of exercises such as lists of difficult words and their meanings, or substitution tables.

The classroom seating arrangement, in ideal conditions, is also different from that of a conventional classroom. Learners are expected to form themselves into small groups and move around freely whenever necessary. The new seating arrangement is a replica of a real world situation in which spontaneity is ranked higher than cold formality.

The grammatical approach dominated the ELT scene till the early 1970s when it became apparent that it was not enough for learners to be 'structurally competent' but 'communicatively deficient'. The ability to produce/write correct sentences, it was generally felt, was necessary but not sufficient. This dissatisfaction with the 'product' of ELT programmes led to a debate which culminated in the development and adoption of the new approach in a big way. Materials were prepared according to communicative criteria and methods/techniques were reshaped according to the requirements of the new approach. One positive contribution of the new movement is a fairly comprehensive perspective in which language teaching and learning has come to be viewed in recent years. This new approach has provided fresh insights into syllabus construction, materials development and classroom methodology. Terms like 'communication' 'real-life', 'functions', 'appropriacy', 'context' and 'discourse' have gained common currency and the teacher has often felt obliged to introspect over his/her new role. To that extent the approach has been useful, though to what extent it has brought about concrete gains in language education is still far from clear.

### **2.4.3 Evaluation in Schools**

Evaluation is an integral part of teaching learning process. Without high quality evaluation in schools, quality of learning cannot be improved. The present system of evaluation requires redesigning in order to make it more learners friendly and humane. Under this theme, continuous comprehensive evaluation and grading system were discussed with the participants.

#### **2.4.3.1. Continuous and Comprehensive Evaluation**

The National Policy on Education, 1986 mentions, "Assessment of performance is an integral part of any process of learning and teaching. As part of sound educational strategy, examinations should be employed to bring about qualitative improvements in education". Apart from making examinations reliable and valid and de-emphasising memorization, in functional terms this would mean also the introduction of "Continuous and Comprehensive Evaluation that incorporates both scholastic and non-scholastic aspects of education, spread over the total span of instructional time", in schools.

The concept of Continuous and Continuous Evaluation (CCE) can be discussed defining each component. The term 'continuous' refers to regularity in assessment. It means that the evaluation has to be integrated with teaching and learning process. The term 'comprehensive' refers to both the scholastic and non-scholastic areas of pupil growth. The growth in both the areas can be ensured only when the evaluation is

the process of finding out the extent to which the desired changes have taken place in the pupils.

Thus continuous comprehensive evaluation means a regular assessment of all the aspects of pupil learning in the school.

The major characteristics of CCE are as follows:

1. The purpose of CCE is to improve learning on the basis of regular diagnosis of weaknesses followed by remedial teaching.
2. Both the scholastic and non-scholastic aspects are evaluated.
3. CCE is informal evaluation in school.
4. CCE uses multiple techniques of measurement.
5. CCE is built into the process of teaching and learning.
6. In CCE the evaluation may be made on three different levels.
  - a) with reference to the student himself;
  - b) with reference to the group;
  - c) with reference to the criteria set by the teacher.

For assessing performance in scholastic areas all school subjects are to be tested. Various tools and techniques like written tests, oral tests, practical tests, assignments, project work etc. can be used for testing the scholastic areas. Frequent testing through monthly classroom tests, terminal exams and also built in evaluation with the teaching, help the teacher to diagnose the learning gaps and organize remedial measures.

The Assessment of non-scholastic areas includes the assessment of social personal qualities, interests, attitudes, values, physical health and co-curricular activities.

A variety of tools and techniques like observation technique, rating scales, anecdotal records, check lists, self-assessment and peer evaluation can be used to assess the student's development in co-scholastic areas.

The teacher may base the evaluation of co-scholastic areas on day-to-day observation. The medical check up can be organized once a year.

The progress of every child in scholastic and co-scholastic areas has to be recorded by the teacher so that it can be reported as and when required. For recording and reporting student's performance the teacher should maintain diaries, keep records of tests, assignments, projects, oral work and also of participation in various activities and then report to the parents every term.

The successful implementation of the CCE scheme will mainly depend on the head of the institution and the teachers. The teachers need to be oriented to build up their capacities to use CCE.

#### **2.4.3.2 Grading System**

The introduction of grades in examination is a long-standing recommendation for implementation. The NPE 1986 also recommended the use of grades in examination. The use of 'grades' in place of marks is preferred for several reasons e.g.

- Grades are more reliable than marks. Marks are not reliable indicators of child's performance because of various defects in examination and scoring procedures.
- Marks awarded to different subjects are not comparable.
- Present system of fixed cut scores for assigning divisions and declaring 'pass' and 'fail' is unscientific and arbitrary.
- Grading helps in eliminating misclassification of students into different categories.

Technically speaking a 'grade' is a symbol associated with an interval of marks supposed to represent, more or less, the same level of performance. In all methods of grading an attempt is made to identify relatively uniform score intervals, in hierarchical order from 'very poor' to 'outstanding' performance.

Some School Boards award grades in public examinations. CBSE introduced the system of declaring results in terms of subject wise 'grades' in its examination in 1977. But it was withdrawn due to opposition by universities. In 1988, CBSE re-introduced a system of grading on a 9-point scale, which is being practiced even at present. Letter Grades are derived from the subject wise marks of external examination. For awarding grades, the Board puts all the pass candidates in a rank order and awards grades on a nine point scale ranging from A (highest grade) to E (lowest grade i.e. fail) CBSE displays raw and aggregate marks along with grades on the certificate.

Grading can be direct or indirect. In direct grading each question is evaluated in terms of a grade. In indirect grading raw scores are converted into grades. There are two types of indirect grading i.e. absolute and relative grading.

In absolute grading, raw marks are converted into grades on the basis of fixed ranges from 0-100 for all subjects. Each grade is given a numerical value from 9 (highest grade) to 1 (lowest grade).

In relative grading, the 'grades' are awarded to indicate the subject wise performance of students in examination. The 'grades' can be awarded on a nine-point scale broadly based on percentiles without any reference to marks.

Each type of grading has its own merits and demerits. Relative grading is more scientific and technical whereas the absolute grading is simple.

For selection or admission, comparison of the performance of students is required. For this, grade point averages in the relevant subjects on the basis of the numerical value of grades could be worked out and used by the concerned agencies. All boards need to adopt a uniform grading system. This will help in making inter board comparisons on broad parameters. Institutionalization of grading in school system would largely depend upon its acceptability in the tertiary sector of education. The UGC, therefore may be persuaded to work out a strategy for removing the bottlenecks and introduce grading system at the university level.



## **2.4.4 Emerging Issues and Concerns of Education**

Education is considered as an indispensable asset in confronting the challenges of the future. In order to meet these challenges it is essential that the system of education and those who manage it should be aware of the emerging issues and concerns and be pedagogically well equipped to address these through the teaching learning process. Therefore a number of crucial issues of education such as value education, inclusive education, human rights and peace education, adolescence education and girls' education were discussed with the participants under this theme.

### **2.4.4.1 Value Education**

Value permeates the whole of human existence and is a major factor in establishing what type of human beings we are. They guide and regulate human action and behaviour. Values are considered essential to the maintenance of life in general and quality of life in particular.

There are different ways to explain the concept. The word values is derived from Latin root word 'Valerie' meaning to be strong and vigorous. According to the Oxford dictionary, Value means Worth. The Encyclopedia of Social Sciences refers to values as interests, pleasures, likes, preferences, duties, moral obligations, desires, wants, needs and many other modalities of social orientation (William 1968). It is also considered as a principle, a standard or a quality that is worthwhile or desirable. To be of value is to have certain virtues. It refers to goodness. A widely accepted concept of value in traditional philosophy is Truth, Goodness, Beauty etc.

Development of values takes place during the process of socialization. These are determined by a series of experiences, which individuals undergo in certain important social institutions like family, neighborhood, school, work place etc.

Education is a process of transmission of certain values to help the learner lead a good life- a kind of life that is satisfying to the individual in accordance with a preconceived pattern incorporating the cherished ideals and values of a society. The question then arises- is value education a separate domain than education? Conceptually the objectives of education is referred to as a deliberately planned educational action aimed at the development of proper attitudes, values, emotions through reflective thinking and independent judgment to help the learner lead a good life. Value oriented education thus aims at introducing human goodness. It covers the development of all aspects of personality - intellectual, social, moral, aesthetic and spiritual.

The values which should be promoted through education should be derived from the universal perceptions of what would make a person good in dealing with oneself and the world outside. It is often pointed out that in a country of cultural diversities like ours, the values, schools should transmit be of a 'universal and unifying nature cutting across cultural, religious and sectarian interests which would promote 'fundamental goodness of human being'.

The National Curriculum Framework for School Education (2000) has put forward a national agenda for value education. The five universal values of Truth, Righteous conduct, Peace, Love and Non-violence have been recommended as the foundation for building the value based programme. Since all education is considered to be a kind of value education, there is a general consensus that value education cannot be treated as a separate course. It has to be infused with the regular school curriculum, co-curricular activities and the over all school ethos. However, some adjustments may be needed for reorganization of the

curriculum following the 'whole school approach'. This will contribute to the creation of an institutional climate to promote values.

Some of the general activities and strategies include: silent sitting/meditation, social service to human beings, other creatures, nature etc. community singing, national integration camps, sports, dramas, celebration of festivals, exhibitions, bal melas, anecdotes and quotations of spiritual leaders, exposure to the principles of major world religions, solving value dilemmas etc

Besides these general activities, integration of value themes with teaching of school subjects is recommended. Some values are inherent in each school subject or in other words, every discipline is a repository of values, which are inherent in its structure and methodology. History could be woven in teaching human values of courage, love, hope, patriotism, compassion, bravery, cooperation, loyalty, justice perseverance and so on. Geography can be taught to understand how we are all interdependent and interrelated to each other. Besides other things, languages are the easiest and most natural to integrate human values like writing prose on value oriented topics, learning songs based on values. Mathematics which is associated with values such as logical thinking, order, elegance, neatness, precision can be used to integrate values in to the wording of the mathematical problems by giving a positive connotation and by creating analogy of mathematical symbols. Similarly, science can be used to teach scientific temper and outlook, open-mindedness, objectivity, curiosity, healthy criticism.

Teachers play a crucial role in value orientation of students. They consciously and unconsciously influence students' outlook and attitudes. Whatever values the teachers demonstrate in day-to-day behaviour, their students tend to imitate and emulate them. The teacher education programme should thus provide a forum for the prospective teacher to develop his/her personality and imbibe values in thoughts, feelings and

behaviour. It presupposes that teacher educators also have a serious commitment to practicing human values.

#### **2.4.4.2. Inclusive Education**

A classroom is a mini society, which has all sorts of children: bright, dull, tribal, first generation learners, talented, gifted, mentally challenged, physically challenged, slow learners, etc. "The concept of 'inclusive education' has emerged in response to a growing consensus that all children have the right to a common education in their locality regardless of background, attainment or disability". The philosophy of inclusion is to be practiced not only by the teacher of a particular class but also by the whole school so that the whole instructional programme becomes meaningful and relevant to each child. Under this approach, students start in a general classroom and perform well as the general environment is adjusted to their needs and gives them an opportunity to realize their potential, which in turn maximizes individual growth and builds a sense of community. Inclusive education is a human rights issue for all, it is good education and it makes good social sense.

Thus, inclusion and inclusive education is on one hand, a human right issue and on the other a strategy to develop a child into a balanced personality capable of not only surviving in a society but also to compete with others without any fear of failure or a complex. The Salamanca Statement (UNESCO 1994), that is very crucial to Education for All, states that every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning. Besides, every child has unique characteristics, interests, abilities and learning need. Education systems should be designed and educational programmes implemented to take into account the wide diversity of these characteristics and needs. Therefore, all those with special educational needs must have access to regular schools.

To provide relevant and meaningful education to groups of children with special learning needs, it is important to modify all the aspects of educational programmes being followed in common schools. Each child in an inclusive classroom needs attention of the teacher in the right perspective.

To make a curriculum accessible the following alternatives will have to be explored in relation to content, teaching materials, responses expected from the child, and methods of assessment.

- adopting existing materials.
- adopting alternative material prepared with an objective to attain the same competencies and skills.
- Creating new materials keeping in mind the requirement of the child and use all these material for classroom instruction.

The adaptation of written material could cover context, vocabulary and assessment methods. Various steps involved in curriculum adaptation may be: collecting information about the syllabus unit and support information; content decision, vocabulary decision, incorporation of the right language and reading activities into worksheets; evolving a suitable pedagogy for transaction of the material; evolving suitable formative and summative evaluation procedures; techniques for continuous and comprehensive evaluation of children's achievement; and finalization of the unit in the light of the felt learning needs of the child.

Once the curriculum related issues have been resolved, the teacher has to concentrate on the instruction part of the educational process. Even in the classroom having a heterogeneous group of students, it is possible that only few students may face difficulties in deriving benefits from the teaching methods adopted by a teacher. The main instructional issues required to be addressed in an inclusive

setting include the teaching cycle, instructional diversity and established principles of instructional delivery and support.

The setting up of the classroom requires a lot of insight on the part of the teacher to make the whole environment of the classroom conducive to effective learning. Students with visual impairments should be able to get a clear view of the blackboard; children with hearing impairment should be able to see the teacher so that he/she could see the lip movements of the teacher; a child in a wheelchair should have enough space to do writing work and move around if need be; a slow learner should be in a position to consult his/her peer if he/she has difficulty in understanding something; a child with a mother tongue different from the medium of instruction should be able to consult the teacher or the peer for an alternative simpler word.

Inclusive education is not an end in itself; it is a means to attain the goal of establishing an inclusive society. Therefore inclusion places welfare of all citizens at the Centre of consideration.

#### **2.4.4.3 Human Rights And Peace Education**

Each century is marked by its achievements and failures. The twentieth century will be remembered for the progress of science and technology, which has created a new world order. However, it is also characterized by two-World Wars and gross violation of the basic rights of individuals, which motivated the international community to adopt the Universal Declaration of Human Rights in 1948 under the umbrella of United Nations.

Human right may be viewed as respect for every human being and implies right to life, to freedom from arbitrary coercion and to be respected.. It is an assertion that rights exist each of us because we are human and

belong to the human race. These are fundamental and inalienable rights, which are essential for life as a human being. Human rights and fundamental freedom allows us to develop fully and use our human qualities, our intelligence, our talents and our conscience and to satisfy our spiritual and other needs.

Education is one of the major sources for the modeling and shaping of the conscience and values of the future generation and schools are more pervasive institutions formally established by the government to accomplish this task. The Universal Declaration of Human Rights rightly stated that “ Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedom” Education for human rights has been defined as ‘training, dissemination and information efforts aimed at building of a universal culture of human rights through the imparting of knowledge and skills and the moulding of attitudes...’. It has to cater both cognitive and affective domain to be effective.

Human Rights education, therefore, should not be understood as merely instruction about human rights instead as education in human rights and for human rights. It is a comprehensive concept encompassing a host of core and related values, which promote a culture of peace, tolerance and sustainable development. These values include equality, equity, social justice, liberty, democracy, truth and honesty, respect for human dignity, integrity, accountability, appreciation of diversity, freedom and responsibility and cooperation etc. School Curriculum, should help in developing these values among students in order to have a peaceful and tolerant world order. Therefore a comprehensive system of education needs to be planned to develop a culture of human rights, which may bring peace on earth. An integrated approach to teaching of the values promoting human rights with subjects

already being taught in the schools has to be adopted. It is also essential to integrate human rights education with curricula of all levels of education starting right from the pre-school level to the higher levels. At the preschool and lower primary level teaching of human rights should aim at fostering feelings of confidence and social tolerance, which are the foundations for the whole culture of human rights, while at the higher levels the focus should be on building of trust. At this level students are mature enough to appreciate the significance of various rights and duties.

Various co-curricular activities may also be consciously planned by the teacher to encourage students' community singing, making collage and participation in exhibitions and displays etc. which may develop creative and aesthetic feeling among students and encourage them in working in groups. At higher stages students may be involved in organizing school clubs, mock parliament, debates on current issues, dramatics and literary activities, collection of current issues from newspapers and its display on the school notice board for sharing their views with others in the morning assembly, celebration of Human Rights Day, Women's Day, Population Day, Anti Apartheid Day, Literacy Day and World Health Day etc. Observation of such important days generates not only awareness but also teaches ones' responsibility and duty to the cause of human rights.

#### **2.4.4.4. Adolescence Education**

The critical elements of adolescent reproductive health have been conceptualized as **Adolescence Education (AE)** in order to facilitate the process of the institutionalization of these elements in the content and process of school education and teacher education. The general objectives of Adolescence Education (AE) stated in the Framework are:



- To provide learners authentic and appropriate knowledge about AE and develop in them an understanding of the reproductive health.
- To promote among them healthy attitude towards sex and respect for the opposite sex in consonance with the positive elements of Indian socio-cultural norms.
- To help them understand HIV/aids, causes and consequences of HIV infection as well as ways and means to prevent the spread of HIV/aids.
- To make them aware of the implications of drug abuse, its consequences and ways of prevention, and
- To develop in them rational attitude towards issues of drug abuse and the skill of saying 'no' to drugs.

Major components of adolescence education are: Process of growing up, HIV/aids and drug abuse etc.

The National Population Education Project (NPEP) has identified certain specific strategies to be employed for effective introduction of Adolescence Education in schools in view of the nature of the existing system. Since the school education curriculum takes its own time to change and allow an innovative educational intervention to get institutionalized, the following two broad approaches will be adopted in order to meet the requirements of both the existing school education system and the project on population and development in schools.

The **formal curricular approach** will continue to be adopted in order to facilitate an effective integration of population and development education including reproductive health elements reflected in the reconceptualized Population Education in the school education system;

The **non-curricular approach** will be emphasized much more than ever before in order to reach various target groups at the earliest without waiting for these elements to formally become an integral part of the

school syllabi and textbooks. Certain broad-based co-curricular activities have been proposed for making a larger and direct impact on student teachers directly in population and development related issues and more particularly in reproductive health issues.

Currently NCERT is in the process of finalizing a brochure on the Guidelines for Organizing Innovative Co-curricular Activities. It will contain the details about the process and modalities of organizing major activities such as Road Race, Extra-Mural Lectures, A.V. Show, Population Education Activities Integrated in National Science Exhibition, Population Education Week and Village Adoption/Population Education Lab Programmes. The Sports Authority of India has been consulted regarding organization of Road Race at district level.

#### **2.4.4.5. Girls' Education and Women's Empowerment**

Education of the girl child is closely linked with women's empowerment. The Constitution of India and its relevant Articles depict the importance of girls' education and women's empowerment. However, it is the National Policy on Education (1986) and its POA (1992) that especially draw a close linkage between girls' education and women's empowerment. The policy clearly states "The National Education System will play a positive interventionist role in the empowerment of women..."

To operationalise the recommendations of NPE (1986) the following parameters of women's empowerment have been laid down in POA (1992).

- Enhancing self-esteem and self confidence of women.
- Building a positive image of women by recognizing their contribution to the society, polity and the economy.

- Fostering decision-making and action through collective processes.
- Enabling women to make informed choices in areas like education, employment and health (especially reproductive health).
- Ensuring equal participation in developing mental processes.
- Providing information, knowledge and skill for economic independence
- Enhancing access to legal literacy and information relating to their rights and entitlement in society with a view to enhance their participation on equal footing in all areas

In pursuance of recommendations made by NPE (1986) special efforts have been made to improve girls education and women's empowerment. All EFA projects like Bihar Education Project, Uttar Pradesh Basic Education Project, Lok Jumbish, District Primary Education Programme (DPEP) and now the 'Sewa Shiksha Abhiyan' have strong gender focus. The project 'Mahila Samakhyas (Women's Empowerment)' was started in 1989 with the aim "to empower women to take control of their own lives". It provides the crucial conceptual and practical link between empowerment and education. Several incentives are being given to promote girls education especially for girls belonging to SC/ST and other disadvantaged groups.

NCERT, NIEPA, SCERTs and DIETs organize training programmes on a regular basis for teacher educators and teachers and other educational personnel to promote girl's education and women's empowerment. The curricula, textbooks and other teaching learning materials are being reviewed and modified from the gender bias point of view. Special care is taken to reflect contribution of women in different walks of life in textbooks and other teaching – learning materials.

Recently the Government of India has brought out a National Policy for the Empowerment of Women, 2001. The policy also lays special emphasis on education of girls. It re-emphasises equal access to education for girls and women, creating a gender sensitive educational system, increasing enrolment and retention of girls in schools and improving the quality of education to facilitate life long learning as well as development of vocational and technical skills by women.

Many NGOs and Voluntary Organisations are also actively involved in promoting girls education, gender equality and women's empowerment at grass root level.

In spite of all these efforts girls' education is still lagging behind than education of boys especially in rural areas and among girls belonging to disadvantaged groups. Gender bias and stereotyping still prevail in society and in schools in one form or the other and many women are still not allowed to take their own decisions. Therefore more concerted efforts are required to improve girl's education and to empower women to lead a good life.

## **2.4.5 Research in Education**

The IASE faculty members have to be actively involved in conducting research in education. Therefore this theme focused on sensitizing participants to the trends in educational research and shift from quantitative to qualitative approach in research. It also included a discussion on action research which can be used by teachers to scientifically and objectively seek solution to their day to day teaching-learning problems.

### **2.4.5.1. Trends In Educational Research And Its Policy Implications**

Educational Research in India picked up momentum during 1940's. During 1950's, an awareness was generated that educational research could make a significant contribution towards policy and practice. The following decade saw a beginning of the public funds being made available for research in education and by the beginning of 1970's there was a massive increase in publicly funded research in education. It was around this time that the issue of accountability gained prominence. It was pointed out that the publicly funded research ought to be practical in nature. The research, which is not linked to policy, is at risk of being seen as a dispensable luxury and researchers have to be ready to tackle major policy issues as legitimate topics for inquiry.

The systematic collection and analysis of relevant information using social science research methods to help formulation/detailing out policy, to formulate action plans/strategy, to assess the performance and to evaluate outcomes constitute the domain of

policy research. The difference between the policy research and the body of research in social science areas lies in the purpose, scope and adequacy to make decisions. The researches done in social sciences at large are like readymade garments with their own sizes and designs. They may not satisfy all the requirements. On the other hand, policy researches are like customized designs serving a specific context in time and space. But, there will be no difference in methods and techniques of conducting policy research as compared to social science research in general. Its contribution to formulation of policies is more in the form of arranging the data and predicting the effect of policy generated cause and effects and some times they give feedback on current status and outcomes.

The trend of educational researches in India continued shifting from one area to another. An analysis of researches documented in five Surveys of Educational Research (Buch, 1974, 1979, 1987, 1991; NCERT 1997) reflects on this shifting trend.

In the first survey a number of studies related to curriculum, sociology of education, psychology of education, educational administration and teacher education were reported. The curriculum related studies were at their peak by the period of third survey and thereafter a decrease in the number of such studies is observed. The studies in the field of sociology of education recorded about five-fold increase by the period of third survey but thereafter a decrease in the number of studies is observed. The studies in the field of psychology of education have consistently increased over the years; though a decrease in the fifth survey is observed. A considerable improvement is observed in the area of educational administration and management. Teacher education is another area where one observes considerable growth over the time. Foundation areas, such as philosophy of education, history of education, economics of education

have not shown considerable growth. The area of programmed learning disappeared after the period of first survey.

In the second survey areas such as comparative education, higher education and non-formal education were also included. To examine the role of technology in education, increasingly greater numbers of studies have been conducted over the years. Language education was additionally included in the third survey as a separate area.

The fourth survey saw the subject specific and discipline specific researches such as social science, science and mathematics education as well as early childhood education, elementary education, vocational and women's education, and education of the disadvantaged. In majority of these areas one observes an increase in the number of studies from fourth to the fifth survey. In the fifth survey, studies related to physical education, art and aesthetic education and distance education and policy research were also covered.

These researches have a bearing on policy formulation yet there are many gray areas, which need attention of educational researches due to their policy implication. Some of these include:

- Impact of teaching English as second language at the primary classes.
- Impact of home language and school language in performance of students.
- Value Education.
- Teacher motivation in rural areas etc.

#### **2.4.5.2. Improving Classroom Teaching-Learning Through Action Research**

In order to improve the quality of teaching-learning different strategies have been contemplated to help the teachers to make teaching learning more effective and joyful in the school stage. Action research is considered as one such endeavour in this direction. It helps the classroom teachers to find solution of their day-to-day problems in a cost-effective manner using a problem solving approach. It also helps the teachers to understand the students in a better way and improve the overall learning of students and school climate. Each teacher has his/her own strategy of handling the problematic solution. Action research is a tool to empower the teacher to encounter his day-to-day problem in a professional ways.

It is an approach to improve practices by changing it through interventions and learning from consequences of changes.

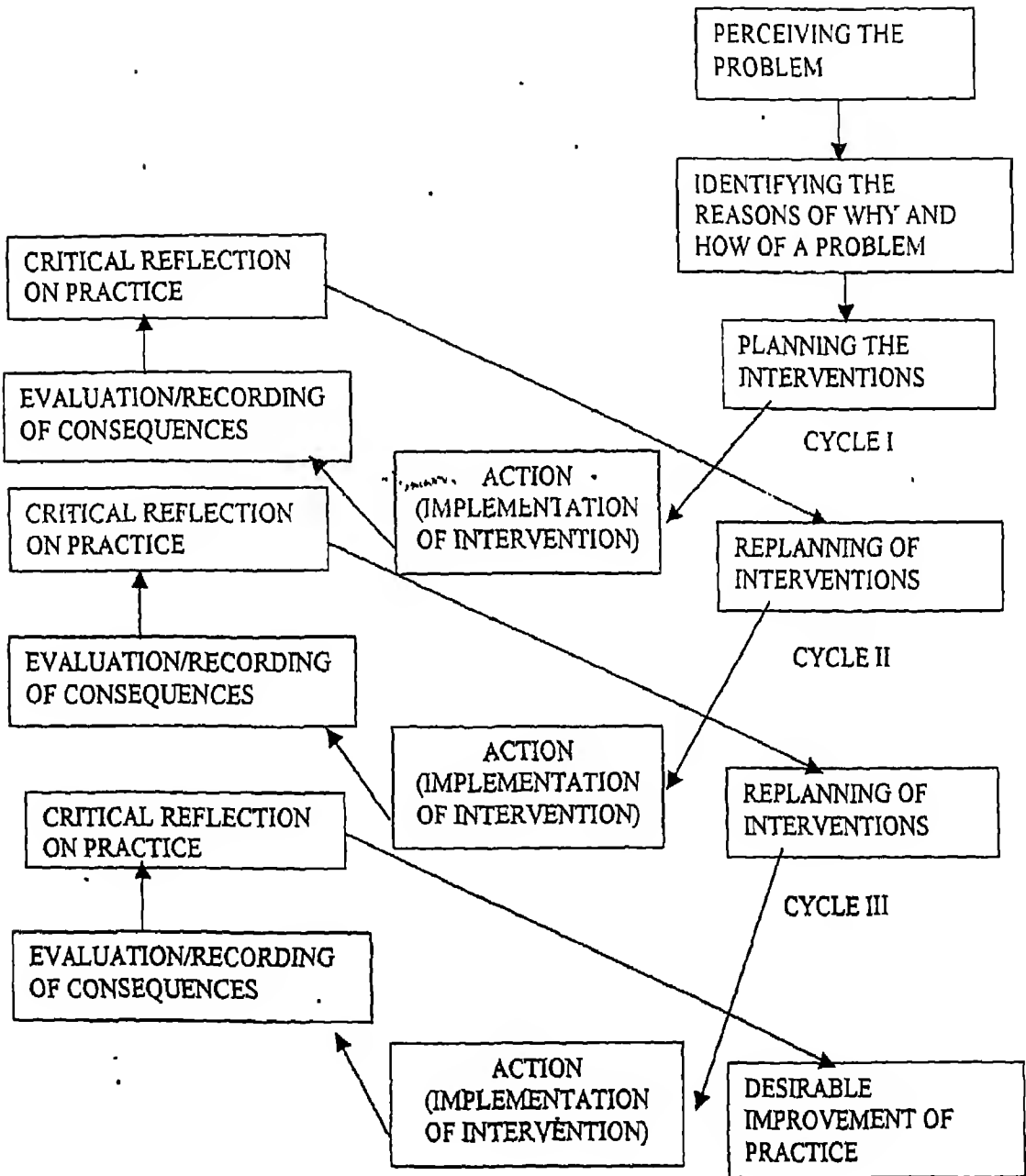
Action research reflects on two different sets of learning - learning about the consequences of the interventions and learning about the process of studying them.

The steps of action research are:

1. Perceiving the problem
2. Identifying the reasons of 'why' and 'how' of a problem
3. Planning the interventions
4. Implementing the interventions
5. Evaluating and recording the consequences
6. Critical reflection
7. Replanning of interventions



## SELF-REFLECTIVE SPIRAL OF CYCLES



Action research is, therefore, a learning process conducted through a self-reflective spiral of cycles of planning interventions, implementing interventions, evaluating and recording the consequences and critical reflection. Normally the action research goes through two or more cycles till the improvement of desirable quality takes place.

#### **2.4.5.3. Qualitative Research In Education**

The main assumptions of empiricist approach have been that human behaviour can be observed, measured and hence predicted. It is also based upon the assumption of deductive reasoning and the principle of falsification. Quantitative research methodology follows these assumptions.

In quantitative research methodology standardized tools are used in which response categories are predetermined by the researcher. In contrast, a researcher using qualitative methodology goes to the field without being constrained by predetermined categories. S/he is open to any response. In qualitative methodology wealth of detailed information about small number of people, cases, organizations are collected. The researcher's skill, competence, flexibility, insight, and rigour play an important role in data collection. Participant observation, qualitative interviewing, focused group discussion, transcript analysis are the techniques that are used in qualitative research, which focuses on studying the processes rather than the end products.

Qualitative research is conducted in natural setting with the purpose of exploring the situation as a whole. Based on inductive

reasoning, it establishes direct personal contact with the people under study, which allows to develop closeness by sharing their experiences and learning their confidence. An important characteristic of qualitative research is triangulation-- investigator and methodological. In investigator triangulation at least three persons do the data collection. They observe the same setting independently, take notes, and compare their notes after the process of data collection is completed. This is done to minimize the effect of individual's biases in data collection. Also, data is collected using three different techniques (e.g. observation, interview, document analysis) to get the real picture. Data is generally collected in the form of field notes, which are later analyzed and categories are derived. Critical events are also recorded.

The collection of data in qualitative method involves three phases; Entry, data gathering and exit. Participant observation, qualitative interviewing, document analysis etc. are frequently employed in qualitative research. " The characteristics of these methods were discussed in some detail.

## **2.4.6 Teacher and Teacher Education**

The Institutes of Advanced Studies in Education perform multifarious activities both for the pre-service and in-service teacher education. Keeping in view the wide spectrum of their job profile, this theme included a host of crucial topics like emerging issues and concerns of teacher education, developments and reforms in teacher education curriculum, teaching skills, school experience programme and professional development of teachers etc. Various phases of in-service training programmes like the training need assessment, organization of training programmes and monitoring and evaluation of in-service training programmes etc. were also discussed in detail. The participants were also given orientation about innovations in school and teacher education programmes. The need for competency based commitment oriented teacher education for bringing qualitative improvement in education was also discussed in detail.

### **2.4.6.1 Emerging Issues/Concerns in Teacher Education**

On the threshold of new millennium education has emerged at the forefront of the world's concern over its future. The role of teacher and teacher education is of prime importance for the effective implementation of educational policies and development. Therefore, the quality improvement of teacher education system in the country is an indispensable need of the education system. The professional preparation of teachers being an evolutionary process has witnessed much progress in its 'structure', 'design' and 'curriculum'. The beginning of 21<sup>st</sup> century has witnessed a reasonably strong system of teacher education in the country. Though the contemporary model of teacher education has evolved over the decades but is overshadowed with severe

criticism of being static and unresponsive to the emerging challenges of the present time. There is a growing feeling that teacher education is not effective in turning out efficient teachers. This concern has been strongly reflected in the National Policy on Education (1986) and its Programme of Action (1992) recommending for the overhauling of the system. It also calls for a substantial improvement in the working condition and the quality of the teachers.

The NCERT has come out recently with a new National Curriculum Framework for School Education which clearly spells out the nation's concern for a meaningful education reflecting the needs and aspirations of the learners and the society. The role of teachers in the development of curriculum as well as in its implementation is vital. It is important that the changes and developments taking place in school curriculum also get integrated in the teacher education programmes. In the light of the new curriculum framework and the ensuing 10<sup>th</sup> Five Year Plan of the country the issues and concerns of teacher education may be as follows.

- How to provide education to all and how to reach the unreached.
- How to reduce the load of school bags and anxiety of parents and children.
- How to empower teachers for Sarva Shiksha Abhiyan.
- How to equip teacher education to address various contemporary social problems.
- Responding to the impact of Liberalization, Privatization and Globalization (LPG) and learning to live together.
- Empowering teachers towards educational leadership.
- Reconceptualizing teachers role as facilitator and moderator in the context of students as self instructors.
- How to revitalize the teachers' and teacher educators' competencies.
- How to define para teachers and identify related problems.
- Revamping the curriculum of teacher education in the light of new thrust areas of school education and restructuring of teacher preparation courses in accordance to indigenous curriculum.

- Capacity building at all levels and especially at secondary level.
- Integration of information and communication technology into schooling.
- Need to explore mass training technology and use of interactive technology in distance education for HRD.
- Implementation of innovative evaluation strategies.
- Social mobilization in education - community participation in school management.
- How to modernize indigenous education like education provided in madarsas, ashramshalas etc.
- How to ensure quality through autonomy in education.
- How to establish inter-sectoral linkages in education.
- How to ensure the quality of the independent schools and private enterprises in education and our responsibility towards them.
- Providing a research base to teacher education.
- How to ensure professional ethics and accountability of teachers.

#### **2.4.6.2. Secondary Teacher Education Curriculum**

The continuous efforts of curriculum planners, experts, members of the society, professionals from other disciplines, teachers and pupil teachers have contributed a lot to the development of knowledge in the field of teacher preparation programme. Now the teacher education courses possess a definite body of knowledge. The courses are based on the need and requirement of the society.. Schools look towards the teacher education institutions to cope with their problems. This has been possible due to acceptance of teacher education programme by the society.

The major weaknesses of teacher preparation programme were first time pointed out by the University Education Commission (1949). Subsequently, The Secondary Education Commission (1953) and

Education Commission (1964-66) also reiterated that the Curriculum was not related to the actual need of the school and society.

NCERT in 1975 developed four components of teacher education curriculum. These components were Theory courses, Teaching specialization, Optional courses and Practical. The nation accepted Ten Year School Curriculum (1975) for the children of the country. Based on this Curriculum the then National Council for Teacher Education (NCTE) developed Teacher Education Curriculum -A Framework (1978). The objectives of teacher education programme included competence to learn school subjects, and understand the roles of the school in the changing society. We all are aware that a structure of the secondary teacher education programme was proposed as pedagogical theory, and content cum methodology and practice teaching working with the community. A shift was proposed for first paper in the form of Teacher and Education in Emerging Indian Society for the first time. Efforts were made to evolve a curriculum relevant to the personal and social needs of the children and schools. The gap between the theory and practice was bridged. Teacher education was made task oriented on the basis of acceptable national goals and values.

The National Policy on Education (1986) was followed by the National Curriculum Framework for Elementary and Secondary Education (1988). The Programme of Action (POA) also called for overhauling of teacher education programme. The National Curriculum for Teacher Education – a Framework (1988) was developed by the NCERT. The four components of curriculum were identified as foundation courses, stage relevant specialisation, additional specialization and practicum and field work .

As envisaged in NPE 1986, NCTE was given a statutory status in 1995. This apex organization developed the Curriculum Framework for Quality Teacher Education in 1998. The document highlighted the contents and concerns of teacher education. The framework of

curriculum for teacher education of secondary stage has been devised into four parts- Objectives, Curriculum Framework, Transaction and Evaluation. The NCTE advocated for enhancing the duration of B.Ed. Programme from one year to two years.

The NCERT developed National Curriculum Framework for School Education (2000). The development of NCFSE is a milestone for the education of children in the first decade of 21<sup>st</sup> century. The institutions like IASE, need to evolve a secondary teacher education curriculum to prepare the future teachers for fulfilling the expectations of the society.

The 93rd amendment of Constitution has envisaged free and compulsory education for all children from 6 to 14 years of age. Naturally, some of the children of this age group will be in the upper primary and secondary stage. The secondary teacher education institutions are expected to take care of these children. The concerns of access, participation and success will emerge from the implementation of 93<sup>rd</sup> amendment of the Constitution. Social, economic and political changes have influenced the value structure of the society. The National Policy on Education 1986 as modified in 1992 envisaged that no nation can rise above the level of its teachers. The role of teacher is to be visualised in the present position. The present situation demands new roles and expectations from teachers. The expectations of the society are continuously enhancing. Therefore, institutions like IASE may identify the role of the teacher for developing curriculum of secondary teacher preparation programme.

#### **2.4.6.3. Teaching Skills - Practice and Application**

Microteaching is a scaled down teaching encounter in class size and time (Bush, 1968). It is a teacher preparation technique which allows teachers to apply clearly defined teaching skills to carefully prepared lessons in a planned series of five to ten minutes encounter



with a small group of real students often with an opportunity to observe the result in videotape. (Allen and Eve 1968).

Basic principles of microteaching as given by Allen and Ryan (1969) are:

1. It is actual teaching.
2. Problems of class room teaching are reduced.
3. One skill is taught at a time.
4. Better and strict control over practice is possible.
5. Effective feed back is provided.

There are phases of microteaching, which are as follows:

- |                                |   |
|--------------------------------|---|
| 1. Knowledge acquisition phase | Observation of demonstration of<br>Teaching skills  |
| 2. Skill acquisition phase     | <i>Analysis of demonstrated skills</i><br>a) Preparation of microlesson<br>b) Practice of skills<br>c) Evaluation of feedback |
| 3. Transfer phase              | Integration of skills and their<br>transfer in actual class room<br>teaching.   |

Few teaching skills which can be reinforced through micro-teaching are :

**(i) Stimulus Variation:** It includes movements from one place to another which seem to encourage useful shifts for attention (e.g. movement towards black board to discuss the diagram drawn on it ).  
**Gestures :** Change in speech pattern, Focusing (Verbal, gestural or verbal-gestural focusing). Change in interaction style, (change in interaction styles from one to the other (1) teacher-group (ii) teacher

pupil, and (iii) pupil-pupil, **Pausing**: short deliberate intervals of silence used while conveying information, lecturing, explaining etc.; and **Oral-visual switching** : i.e. change in the medium-oral, visual or oral-visual through which information is conveyed to pupils.

**ii) Probing Questioning**: It includes prompting questions; seeking further information, refocusing questions, redirecting questions, and increasing critical awareness questions

**iii) Explaining**: During the course of teaching learning process, at times, situations arise, where a simple narration or description of a phenomenon, event or principle does not bring desirable understanding on the part of the learner. To explain properly, the cause and effect of a phenomenon or how and why of an event, it becomes necessary to put the ideas in a systematic way, they should be logically arranged also.

**iv) Illustrating with Examples**: This skill includes formulating simple examples Simple example is one that is related to the previous knowledge of pupils which can be judged from their participation; formulating examples relevant to the rule of concept; formulating interesting examples; using appropriate media for examples; using examples by inducto-deductive approach.

**(v) Black Board Writing**: The following rules for using the blackboard may increase its effectiveness as a visual aid:

1. Collect everything you will need-chalk, ruler, eraser, compass.
2. Keep the blackboard clean.
3. Prepare complicated illustrations before hand.
4. Do not crowd the blackboard-few important points make a vivid impression.

#### **2.4.6.4 School Experience Programme (SEP)**

School Experience Programme is considered to be a very important 'practical' phase in student teacher's preparation for 'regular teaching at any level of school education. It enables the student teachers to apply and verify for themselves the practicability of the theoretical knowledge of foundation courses, content of various academic subjects, methods and techniques of curriculum transaction and evaluation, class and school management in actual school situations. The term "School Experience Programme" has been used in a wider context. It is generally known by several names like 'practice teaching', 'internship', 'field experience' programme etc. However, SEP is a comprehensive concept which includes all these above concepts and much more.

SEP has to be planned and organized in a very systematic manner seeking the help of principals and teachers of Cooperative Schools, teacher educators and student teachers.

Organisation of various activities under SEP can be classified as

1. Pre active phase activities
2. Interactive phase activities
3. Post active phase activities

The pre-active phase may include

- Visit to cooperative school to study school environment, to observe teachers at work and to know and understand children they are going to teach.
- Preparation of lesson plans.
- Practice in core teaching skills in simulated conditions.
- Observation of lesson of teacher educators and good teachers in the schools.

The interactive phase may include

- Placement of students in cooperative schools for actual teaching experience
- Teaching school subjects
- Organizing co-curricular activities
- Maintaining school records
- Preparing teaching learning materials to be used during teaching learning process.

Supervision and guidance are to be provided continuously to the student teachers with a view to improve their teaching skills and organizational competencies.

Post active phase includes evaluation of performance of student teachers during school experience programme. However, evaluation has also to be done simultaneously during the pre active and inter active phase of SEP. For example continuous feed back has to be given to student teachers for lesson planning, practice of teaching skills under simulated conditions, preparation of teaching aids to be used during actual teaching in classroom. Post active phase also include assessment of various reports and assignments submitted by student teachers.

In order to make SEP successful, a follow up programme needs to be followed which involves:

- (i) To review the entire programme by identifying its strength and weakness, by finding out ways and means of removing bottlenecks/constraints and by locating new directions for improvement and
- (ii) To assess the extent of student teachers' development as a prospective teacher.

#### **2.4.6.5 Professional Development of Teachers: The Key to Quality Education**

Teacher education is a life long professional development process beginning with initial teacher preparation and continuing throughout teachers' career. Professional development implies updating, strengthening and sharpening of the professional competencies and development of understanding and insights in different processes of a profession.

Various dimensions about the professional development of teachers and subsequent school improvement are as follows:

- Professional development is a life long process beginning at the pre-service stage, induction and during the service career.
- Professional development is a continuing and regular process.
- Democratic processes foster professional development, organizational improvement and responsibility.
- Professional development must include individual development and organizational development in order to improve the capacity of the school/Organization to solve problems and renew itself.
- Professional development must be driven by a clear, coherent strategic plan for the school/district, for each school, and for individuals.
- Professional development should have a focus on students' needs and learning outcomes.
- Professional development should have multiple delivery mechanism.
- Professional development should include a combination of generic and content specific skills.

Though the need for systematic professional development of teacher is yet to be realized, the country has taken significant initiatives towards teachers' professional growth through different in-service

training programmes. National Policy on Education-1986 brought drastic change in teacher education by emphasizing the inseparability of pre-service and in-service education, which has contributed to concretize the vision towards professional growth of teachers and to institutionalize in-service education.

The professional development process has a common goal namely, improved practices. An overarching goal for professional development is that teachers acquire knowledge, skills and dispositions to ensure quality and social justice for all learners. Professional development programmes should be an ongoing process instead of being built upon the usual series of one-shot events. Nonetheless, there are distinctly different strategies or routes for achieving that goal. The problem of teachers' professional development can be addressed through a variety of strategies such as self study, participation in seminars, workshops; orientation or training programmes, visits to educational institutions, experiments and action research, participation in educational debates and competitions; contributions in journals magazines and newspapers on educational topics.

Professional development is the vehicle for improving the education of teachers. The basic characteristics of professional development plan are:

- considering teachers as learners, providing enough space for continuous learning-self-learning, in-service training.
- long-term investment and commitment to teacher's professional development.
- focusing on teacher's need and concerns, teachers' developmental needs must be assessed on a regular basis.
- building professional development climate as well as infrastructures and new approaches to the organization of professional development.

The professional development plan should focus on teachers' need and organizational development involving different phases of planning. Hence, the professional development of the teacher is the key to improving teaching and learning process in schools and providing quality education to all children.

#### **2.4.6.6 Need Based In-service Teacher Training: Assessing Training Needs of Teachers**

Inservice training of teachers is widely recognized as one of the significant interventions to improve the professional competence of teachers but it has still remained largely sporadic and adhoc without making any visible impact on the performance and behaviour of teachers. It is observed that generally there is a wide gap between what is desired by the teachers and what is given to them through in-service training. One of the main reason for this might be that a large number of our in-service training programmes for teachers are organized without systematically assessing their training needs, though some efforts have been initiated in this direction, especially after commencement of DPEP.

A Need is a gap or deficiency between 'what is' and 'what ought to be' or need is a gap between current status and desired or required level.

Every profession requires certain standards of performance, which should be met by its professionals. If the actual performance of professionals meets the desired standards of performance, they do not need any training. On the other hand if there is significant gap between these two, professionals need training to improve their performance.

Being a profession, teaching also expects certain standards of performance from its professionals i.e. teachers. If the performance of a teacher does not meet the desired or expected level of performance, there is deficiency in the performance of that teacher and he/she needs training to bring his/her performance upto the desired level. The

performance deficiency of a teacher may either be due to lack of mastery of content /subject matter to be taught by him/her and /or because of inadequate mastery over teaching skills. The performance deficiency of a teacher can also be attributed to the lack of motivation and commitment to the profession etc.

Need assessment is a data gathering and analysis process. This is done to identify the needs of individuals, groups, institutions and society. For assessing training needs of teachers we should clearly spell out what do we expect from teachers in a particular context? Then we have to assess their existing level of performance with the help of suitable tools and techniques. The gap between the two will give an assessment of their training needs.

The necessary data for identification of training needs of teachers can be gathered by using a variety of tools and techniques eg. Questionnaire, Diagnostic/Achievement Tests, Observation of Teacher's Classroom Behaviour, Focus Group Discussion, Analysis of Pupil's Answer Scripts, Self Assessment etc. Each tool and technique has its own advantage and disadvantage. Every tool and technique may not be used in every situation e.g. if we want to assess the pedagogical skills of teachers to teach a particular subject, the observation technique will be more appropriate. Similarly if we have to assess the content related needs of teachers, diagnostic/ achievement tests will be most appropriate.

It is always better to use a combination of tools to assess training needs of teachers.

#### **2.4.6.7 Organization of In-service Training Programme**

In-service training is necessary for teachers to upgrade their knowledge and professional competence. In order to successfully organize an in-service programme, it has to be properly planned in



advance. The first task of the organizer is to assess the needs of the target group.

On the basis of the needs of the trainees, the objectives may be defined which should be achievable and assessable. These should be spelt out in behavioural terms.

A curriculum design is then prepared in detail to meet the objectives. It should include the content to be covered in the programme, details about the resource persons along with their specializations and contact address, field visits to be organized during the programme and teaching aids to be used. The curriculum design should also highlight the transactional methodology to be used in the programme keeping in view the nature of the topic, needs of the trainees and infrastructure available. Then a detailed time-table may be prepared.

It is desirable that for every in-service programme self-learning material should be developed based on the training needs and training content. The teachers can go through the study material, reflect upon it and use it later on.

There are various modes of organizing in-service training programmes. These are Face to face mode, Distance mode, Distance-cum-contact mode.

At present the most commonly used mode in inservice training is the face-to-face mode. In this mode the resource persons directly interact with the participants, which may include lecture, discussion, activities, group work etc. To cover a large number of teachers, cascade mode may be used but it may result in transmission loss.

In distance mode, a large number of teachers can be covered at a time. This may be done by using correspondence, T.V., video conferencing, radio or internet. Good infrastructure facilities are a pre-requisite for this mode.

Many correspondence courses use distance-cum-contact mode. The self-learning material is made available to the trainees followed by

T.V., radio, video or Internet input. Then a contact programme i.e. face to face programme is also organized. Thus such a programme uses a multi-mode strategy.

#### **2.4.6.8 Monitoring and Evaluation of In-service-training Programmes**

There is always a need to take stock of things periodically and assess the accomplishments and failures of any programme. This is equally true of the in-service training programmes for teachers. A considerable investment is made in organizing the in-service education programmes. It is therefore necessary to monitor their quality and evaluate their efficacy.

**Monitoring** is the process of watching periodically the process of a programme in order to identify its strengths and weaknesses with a view to taking corrective measures as needed for the purpose of optimising the effectiveness of the programme.

Monitoring is of three types. **Compliance monitoring** attempts to ensure whether the required inputs have been provided. The underlying assumption is that adequate level of performance would flow if the training programme meets the specified inputs like training materials, resource faculty, equipment, library facility, supporting staff etc.

**Diagnostic monitoring** identifies the strengths and weaknesses of the programme in order to take remedial measures immediately. **Performance monitoring** assesses whether desired changes in participants knowledge, skills and attitudes have taken place or not. It helps to determine the extent to which the objectives of training have been achieved.

**Evaluation** is defined most simply as the determination of the worth of a thing. Programme evaluation consists of those activities

undertaken to judge the worth or utility of a programme in improving some specified aspect of an educational system. (Worthen, 1987).

Different criteria can be employed for evaluating the quality of training. **Reaction criterion** is the most commonly used for evaluating the effectiveness of a training programme. In this participant's reactions are obtained through reaction proforma or through focused group discussion. **Learning criterion** is used to assess learning in terms of knowledge acquired, skills learnt and attitude developed by the trainees as a result of training. Generally pre-test and post-tests are used to assess the specific gains. By using **Behaviour criterion** the evaluator tries to find out whether the trainees have applied their learning on their job. If a teacher exhibits desirable behaviour in the classroom as a result of training, the training could be considered effective. **Result criterion** is the ultimate criterion manifested in the pupils' learning.

The following dimensions of a training programme need to be monitored and evaluated.

- training design and curriculum
- training material
- training delivery
- outcome of training
- utilization of training gains

Various **tools and techniques** can be used for monitoring and evaluation. Participants' reaction scale, interview of resource persons, focused group discussions, observation of training camp, classroom observation, questionnaire, case study of participants, rating scales are some of the techniques and tools, for collecting relevant data. The

information gathered can either serve to improve the programme or provide the rationale for discontinuing it.

#### **2.4.6.9: Innovation in School Education and Teacher Education**

Innovations play a vital role towards enhancing the quality of teaching and learning in schools as well as teacher education institutions. The success of any educational policy and reform depends on the quality of innovative inputs based on the needs of the system. The teacher is the key resource in the reform, redirection and renewal of education. The NPE 1986 states, "Teachers should have the freedom to innovate, to devise appropriate methods of communication and activities relevant to the needs and capacities and concerns of the community."

The DTEE, NCERT organizes every year an all India competition for teacher educators and school teachers to identify and recognize the innovative practices and experiments conducted by them in the field of teacher education and school education respectively.

The main objectives of this twin project are:

- 1) to create an awareness among teacher educators and school teachers of the need for improving education through educational innovation, practices and experiments;
- 2) To encourage and provide incentives to teacher educators and school teachers to try out innovative ideas and practices and undertake researches and experimentations directed towards improvement of different areas of teacher education and school education.
- 3) To encourage them to undertake and replicate the tested and useful innovations and experiments recognised at the national

level in different areas of teacher education and school education.

Teacher educators working at preprimary, elementary and secondary level in any teacher education institution can participate in the competition. The school teachers working at pre-primary, elementary or secondary/senior secondary level in a school are eligible for the scheme. The participating teachers/teacher educators have to submit a paper in written form reflecting his/her innovative practice/experiment conducted.

The papers submitted by teacher educators and teachers are evaluated at three level i.e. (1) at the regional level in respective Regional Institute of Education (2) at the central level at NCERT, Delhi and (3) again at central level through the presentation of papers at a National Seminar, where papers are to be discussed in the presence of other teachers, experts and evaluators. The awards are given to 30 teacher educators and 70 teachers every year.

The analysis of last five years awarded papers revealed that participation of teachers was much better than the teacher educators in the All India Competition. Participation from the southern states was more than participation from the northern states.

The DTEE is making concerted efforts to promote this scheme through journals published by NCERT, Gyan Darshan (Television), Radio and internet (NCERT's website). In every training programme/meeting, seminar, conference organised by NCERT, one session is devoted to this scheme.

#### **2.4.6.10 Not By Competency Alone**

The teacher and the quality of teaching have acquired a paramount importance all over the world. Towards quality enhancement in teacher education, National Council for Teacher Education in its Curriculum Framework (1998) stressed upon competency based teacher education. Further NCTE brought out documents on competency based and commitment oriented teacher education for quality school education.

In recent decades the concept of competency based teacher education has gained currency in teacher education programmes. Competence is an organized, co-ordinated activity related to a situation, which involves a whole chain of sensory, central and motor mechanisms. Teaching competence may be defined as a set of knowledge abilities and beliefs a teacher possesses and bring them to the teaching situation at performance level. In other words, teaching competences are those abilities and skills, which become a part of teachers' repertoire and are useful for classroom interactions.

NCTE has identified ten competencies, five commitment areas, and five performance areas, which are interrelated and have interactive dimensions. The ten competencies areas are: Contextual competencies, Conceptual competencies, Content competencies, Transactional competencies, Competencies related to other educational activities, Competencies to develop teaching learning materials, Evaluation competencies, Management competencies, Competencies related to working with parents, Competencies related to working with community and other agencies.

These competencies have been crucial to teacher preparation and also enhancing their teaching quality. However developing competencies alone will not be sufficient. It has to be accompanied by commitment

and performance of the teachers. Hence, important areas of commitment like commitment to the learner, to the society, to the profession, to achieve excellence for professional actions and commitment to basic human values need to be explicitly covered in pre-service and in-service education curriculum. Five performance areas like performance in the classroom, school level performance, performance in out of school activities, performance related to parental contact and cooperation and performance related to community contact and cooperation are needed to make the teacher a better performer to attain quality education.

The transactional competency which is the key to the teaching learning process needs to be developed amongst teachers in order to augment the possibility of optimum learning. Teaching learning process (Samvada) takes a different hue when there is a genuine dialogue between the teacher and the student. The word 'dialogue plus' is used to communicate the meaning that the conversation between two people is good intentioned, purposeful, based on mutual trust, faith, love and concern. In educational context 'dialogue plus' cannot be carried out unless the main players i.e. the teacher and the student display a set of values that makes it (dialogue plus) an act of mutuality, the term used by Martin Buber(1958) or the act of unconditional positive regard, the term used by Carl Rogers(1983) in the context of non-directive counseling. For a successful dialogue the teacher should have the following values.

- Clarity of expression
- Concern about the client or student
- Competency in the subject he/she is dealing with
- Self-confidence

The pupil (student) should have:

- Attentive listening

- Reflection on what has been said
- Curiosity; undertaking more interactions to seek new knowledge
- Willingness to modify his/her field of perceptions in the light of new knowledge.

As referred earlier, dialogue as an activity must be based on six cardinal values of faith, love, trust, hope, humility, critical thinking and to achieve this the teacher and the student should pay special attention to values related to communication and to attentive listening.

Like the teacher a student should have an appropriate value system that will help him/her to understand the dialogue and assimilate the message. The student's value characteristics are attentive listening, reflection and thinking on what has been said, interacting further with the teacher to gain knowledge on newer dimensions, keeping up his/her curiosity and hunger to learn more and finally assimilating all that which has been presented to him/her.

The Gita is an excellent example of attentive listening, of detachment, of concern, of thinking on the totality of the problem, of critical thinking, of mutual love, respect, faith and trust. It is the dialogue plus par excellence. To achieve this goal, teachers should mould their efforts. Towards that goal of ideal dialogue, teachers should put in efforts and make classroom interactions as productive and meaningful as they can.



### **2.4.7 Educational Technology: Concept and Application**

The genesis of the concept of Educational Technology has been from two sources namely, audio-visual aids and the programmed learning. Later on another dimension i.e. System Analysis was added to this field. In 1967 the recognition was given to Educational Technology (ET) in United Kingdom by the National Council of Educational Technology (NCET).

ET is a science for design, development, implementation and evaluation of methods and materials for enhancing human learning.

According to NCET Educational Technology is the development, application and evaluation of system techniques and aids to improve the process of human learning.

ET is based upon the principles of learning and communication. It involves hardware (ET-1), software (ET-2) and system approach, all these together improve the teaching learning process.

The scope of ET is very wide. It can be used for personalized education/instruction as well as for mass education. It is helpful in bringing innovations in methods and techniques of teaching, production of new instructional materials and in providing better understanding of the psychology of learning. It demands change in the role of teacher from task master to facilitator and seeks involvement of mass media in education. However, too much use of ET indiscriminately is not useful.

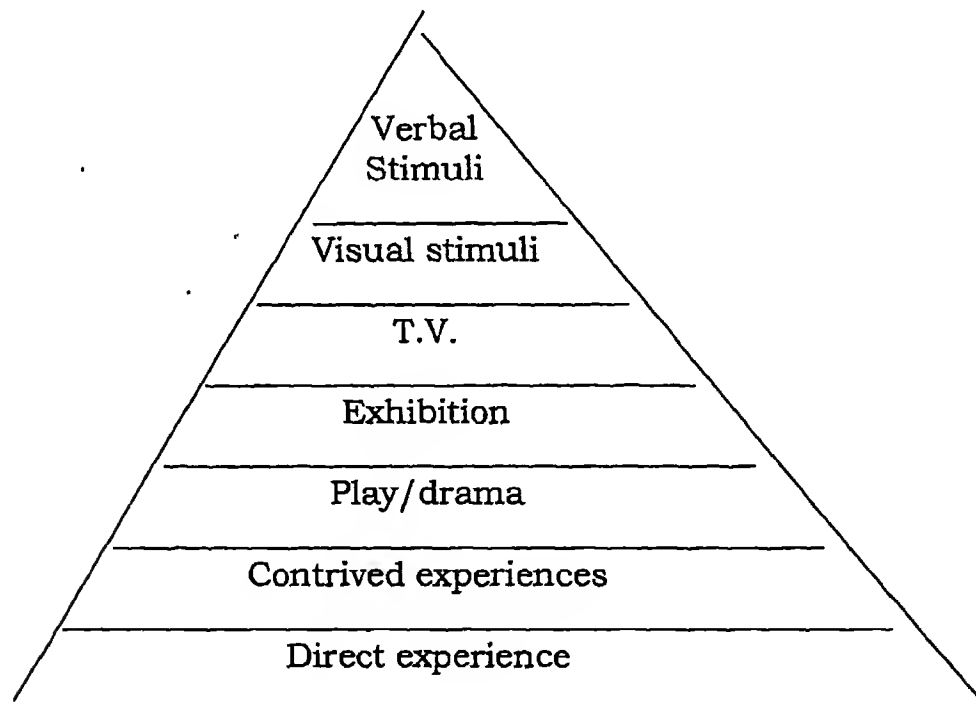
The hardware in ET includes a variety of devices/aids e.g.

charts, globes, models (non projected techniques), OHP, slide projector (projected techniques), radio, audio cassettes, gramophone, audio CDs (Audio media),

films, video cassettes (visual media), computer mediated instruction-multimedia, CDs, Computer assisted instruction /learning, on line learning (Internet).

The teacher has to make use of ET devices depending upon the needs of the learners, available resources and the context.

**How to make use of ET in teaching learning can be explained with the help of following diagram.**



For better learning verbal stimuli should be minimum and direct experiences should be maximum.

In preparing most of the ET based audio-visual programmes the ASSURE Model is followed. Here:

- A - Analyze learners – their cognitive style, characteristics, needs
- S - Specify objectives of the programme
- S - Select media and materials
- U - Utilize media and materials
- R - Require learners' participation
- E - Evaluate and revise.

For making effective use of ET in schooling process do the following:

- Task analysis of teaching
- Rearrange the material
- Explore and use the resources available nearby eg. newspapers, magazines, radio TV, folk media etc.
- Have better management
- Evaluate the teaching-learning process.

#### **2.4.8. Information and Communication Technology in School Education**

The participants were exposed to the use of Information and Communication Technology in school education through theoretical lectures, demonstrations and hands-on-experiences. The two days programme included the following:

- The need of using ICT in teaching learning process
- Computer-hardware and software
- Use of computers in school education
- Training in basic skills required for operating a computer
- Windows basics
- File Management – to keep track of files and folders
- Word Processing – for preparing reports and other documents
- Data base management system – for preparing data base and retrieval of information
- Introduction to global communications -Internet surfing and electronic mail
- Making presentation through power point.

## 2.4.9. Functions Of Universities

The term university is derived from the Latin word 'Univeritas' meaning an organized body of individual (community), or a corporation. However, it is a common perception that a university consists of a community of people of superior intellect, engaged in critically or holistically examining all aspects of human life and activity.

The first university in the world was established in Bologna, Italy. The function of universities in India, whether state or central, have changed with the march of time. Certain functions remain same over a period of time whereas others vary according to social and cultural requirements. University is a social institution, which shows path to the society and takes care of its needs. Besides an educational institution, it is also a cultural institution responsible for social change and transmitting culture. It is an institution to promote human values amongst our citizens. Though there has been phenomenal expansion of universities in our country over the decades, universities have not merged with the society. They rather function in an isolated manner.

In the contemporary context, Indian universities have four functions:

1. To impart knowledge
2. To create knowledge
3. To extend knowledge to the service of community
4. To extend social criticism

These functions are not only educational but also political.

1. **To impart knowledge:** The major function of the university system is to impart knowledge. It is not simply filling the minds of students with information and ideas but to develop

an individual's capacity to acquire knowledge independently. The students have to shoulder the responsibility of learning. The major function of the university is to impart the art of learning. Knowledge develops the capacity of an individual to discriminate between true and false. The acquisition of information rather remains at superficial level and may not be always converted into knowledge. Knowledge stimulates our thinking process and does not end at the university level. The students must prepare themselves to convert their knowledge into wisdom. Wisdom enables us to perceive the right things. Hence, it moves in three steps: information, knowledge-wisdom. These three steps are inextricably interlinked with each other. Education is the art of utilization of knowledge for wisdom.

2. **To create knowledge:** Research is essential to create knowledge and innovation. Research can be fundamental and applied. More researches are needed to get insight of the cultural development. For understanding the nature of students and prepare them for education, investigation of culture is essential.

3. **To extend knowledge for service of community:**

This has been a neglected area, which requires fresh thinking. So far universities have remained isolated from the local communities. One could visualize the light of knowledge confined to the university without spreading it to the neighborhood institutions, community etc. If this knowledge can be reached to the community, it can improve social standards, remove superstition and prejudices. In the contemporary context, university has failed in this respect,

which has given rise to social evils, prejudices, communal feelings etc.

**4. To extend social criticism:**

By extending social criticism a university performs its moral duty. It can be done by examining the social functioning and the direction the society is moving towards. The teacher has to be objective in dealing with social phenomenon.

Keeping in view the current scenario, there is need for relooking and reformulating the functions of universities. Hence, while establishing a new university, we may apprise ourselves with social changes, demands and cultural roots of our society.

## **2.5 Educational Visits**

### **2.5.1 Publication Division**

A visit to the Publication Division was arranged for the participants on 28th May, 2002. The participants visited the sales counter and scanned the latest books, journals and other print material. The participants were given the NCERT catalogue. They selected and purchased books according to their own interest. They were apprised about the publication of NCERT textbooks, instructional and supplementary materials, journals and research monographs. The participants showed keen interest to know about the procedure for getting books at their own place. The same was explained to them. Besides this, the procedure for purchasing journals of NCERT as well as contribution in these journals was also explained.

### **2.5.2 National Resource Centre for Value Education**

A visit of the participants was arranged on 28th May, 2002 in the afternoon to see the National Resource Centre for Value Education set up in the Department of Education Psychology and Foundation of Education. This centre was inaugurated on 14th September 2000 with the following objectives: —

- i) Develop plans, programmes and activities for value - orientation of school education.
- ii) Design strategies for implementing the plans and programmes.
- iii) Develop educational material and other aids
- iv) Document and disseminate information



- v) Provide extension and consultancy services
- vi) Serve as a treasure-house-cum-reference library of educational material.

The faculty of the Department explained the functioning of the this centre. The brochure consisting the above objectives, material available and aids was distributed among the participants. The procedure for analysis of human values in textbooks was explained. The Department shared with the participants some emerging issues on value education for conducting research. The participants showed their keenness to conduct research in this area.

### **2.5.3 Central Institute of Educational Technology**

One of the significant programmes of the NCERT is to promote the use of educational technology, especially the mass media for improving the quality of teaching learning process and developing the alternative system of education at the school level. The Central Institute of Educational Technology (CIET) is mainly responsible for the assessment of needs, preparation of user profiles, design and production of audio and video programmes and other teaching learning aids, training of state level personnel in various aspects of educational technology. The participants visited CIET on 30th May, 2002 and interacted with the faculty about its role and functions as mentioned above. They observed some audio and video programme in action. They also visited the studios. One film on CIET was also shown to them.

## **2.6 Valedictory Session**

The closing session of the training programme for the teacher educators from IASE, Gandhi Vidya Mandir, Sardarshahr, Rajasthan was held on 31<sup>st</sup> May, 2002 at 3.30 p.m in the Conference Room, Zakir Hussain Block, NCERT, New Delhi. Prof. M.S.Khaparde, Joint Director, NCERT chaired the valedictory session.

Prof. G.K.Lehri, Head, DTE&E welcomed Prof. Khaparde and apprised him about the programme. He said it was a unique programme as the whole faculty of IASE, Gandhi Vidya Mandir had participated in this programme. Prof. Mamta Agarwal, the programme coordinator, presented a brief report of the programme which was followed by the participants' views about the programme. Acknowledging the utility of the programme the participants mentioned that it would help them in improving the quality of their preservice and inservice teacher training programmes in future.

Prof. Khaparde, in his valedictory address, congratulated the department for organizing this programme successfully. He expressed his satisfaction and happiness about the participants reactions and appreciated them for their full involvement in the programme. He further stressed that all the modern equipments and gadgets may be used during transacting the training curriculum. More and more discussions should be conducted and visits to innovative institutions may be made so as to widen the horizon of the participants and promote new ideas. New experiments and innovations can give us new directions in the field of education. Highlighting the importance of information and communication technology he stressed that all schools and teacher education institutions should use this technology to keep themselves abreast with changing times. Prof. Khaparde

emphasized that the IASE faculty should undertake research in the area of school education. He extended NCERT's full cooperation in this regard. He invited the participants to submit their proposals to ERIC so that the funds could be made available for research. Prof Khaparde expressed his happiness about the quality of the programme and said that such quality programmes will help us in solving our educational problems. Prof. Khaparde also distributed the certificates to the participants.

The valedictory session was concluded with a vote of thanks proposed by Dr S.K.Yadav



## **APPENDICES**



**List of Participants**

**Sr.No. Name and Designation**

1. Dr. Dinesh Kumar  
Principal & Dean (Education Faculty)
2. Prof. Surendra Singh Verma,  
Vice Principal
3. Dr. Amitabh Sharma  
Professor
4. Dr. (Smt.) Saroj Sharma  
Professor
5. Dr. Markandey Rai  
Professor
6. Sh. Shyam Prakash Shrivastava  
Reader
7. Sh. Surendra Singh Yadav  
Librarian cum Lecturer
8. Miss Santosh Jain  
Lecturer
9. Dr. Anil Kumar Upadhyaya  
Lecturer
10. Dr. Ram Manohar Rai  
Lecturer
11. Dr. Ratan Lal Bhojak  
Lecturer
12. Dr. Harpal Singh  
Lecturer
13. Sh. Ajay Krishan Tiwari  
Lecturer

14. Dr. Vidyanand Pandey  
Lecturer
15. Sh. Rajeshwar Prasad  
Lecturer
16. Sh. Rishu Deep Bhatnagar  
Lecturer
17. Sh. Sanjay Kumar Sharma  
Lecturer
18. Sh. Raj Kumar Mali  
Lecturer
19. Sh. Pravesh Kumar Chauhan  
Instructor
20. Sh. Prabhkar Dixit  
Instructor
21. Sh. Jitendra Kumar Lodha  
School Lecturer
22. Sh. Dileep Kumar Chaudhary  
Teacher
23. Smt. Nirmal Kumar Sharma  
School Lecturer
24. Smt. Rajni Sharma  
Lecturer
25. Miss Madhu  
School Lecturer
26. Smt. Rashmi Chandra  
School Lecturer
27. Sh. Rajveer Singh Rathore  
School Lecturer



**List of Resource Persons**

1. Prof. J.S. Rajput  
Director,  
NCERT, New Delhi.
2. Prof. M.S. Khaparde  
Joint Director (C )  
NCERT, New Delhi.
3. Prof. O S. Dewal  
Former Principal  
RIE, Ajmer.
4. Prof. S.N. Singh  
Ex. Head & Dean  
Faculty of Education  
Banaras Hindu University  
Varanasi.
5. Prof. G.K. Lehri  
Head, DTEE  
NCERT, New Delhi.
6. Prof. R.K. Dixit  
Head, DESSH  
NCERT, New Delhi.
7. Prof. R.D. Shukla  
Head, DESM  
NCERT, New Delhi.
8. Prof. K.K. Vashishtha  
Head, DEE  
NCERT, New Delhi.

9. Prof. D.K. Bhattacharjee  
Head, DEPFE  
NCERT, New Delhi.
10. Prof. Neerja Shukla  
Head  
DEGSN  
NCERT, New Delhi.
11. Prof. R.L. Phutela  
CIET, NCERT  
New Delhi.
12. Prof. Sushma Gulati  
DEPFE  
NCERT, New Delhi.
13. Prof. Avtar Singh  
DEME.  
NCERT, New Delhi
14. Prof. Mamta Agrawal  
DTEE  
NCERT, New Delhi
15. Prof. B K. Mattoo  
DTEE  
NCERT, New Delhi
16. Prof. S. Nagpal  
DTEE  
NCERT, New Delhi
17. Prof. Saroj Yadav  
DESSH, NCERT  
New Delhi.
18. Dr. A.K. Srivastava  
Reader, DERPP  
NCERT, New Delhi
19. Dr. Gauri Srivastava  
Reader, DWS  
NCERT, New Delhi

20. Sh. Nasiruddin Khan  
Reader ,DESSH  
NCERT, New Delhi
21. Dr. K.M. Gupta  
Reader, DTEE  
NCERT, New Delhi
22. Dr. D.D. Yadav  
Reader, DTEE  
NCERT, New Delhi
23. Dr. S.K. Yadav  
Reader, DTEE  
NCERT, New Delhi
24. Dr. Raj Rani  
Reader, DTEE  
NCERT, New Delhi
25. Dr. Saroj Pandey  
Reader, DTEE  
NCERT, New Delhi
26. Dr. Santosh Sharma  
Reader, DTEE  
NCERT, New Delhi
27. Dr. Pranati Panda  
Reader,DTEE  
NCERT, New Delhi
28. Dr. Kamlesh Mittal  
Reader, DCETA  
NCERT, New Delhi
29. Dr. Asha Jindal  
Reader, DCETA  
NCERT, New Delhi

## Appendix iii

### **Programme Schedule** (20-31 May, 2002)

<b>20 May, 2002</b>		
9.30- 10.00 a.m.	Registration	DTEE
10.00-11.15 a.m.	Inaugural Address	Prof. J.S.Rajput Director, NCERT
11.30- 1.00 p.m.	Interactive Session	DTEE
2.00-3.15 p.m	Teacher Education Curriculum	Dr. K. M. Gupta
3.30- 5.00 p.m.	Professional Development of Teachers	Dr. Pranati Panda
<b>21 May, 2002</b>		
9.30-11.15 a.m.	Educational Change- Global Context	Prof. J.S. Rajput
11.30-1.00 p.m.	Developing Curriculum Framework for School Education	Prof. R.K. Dixit
2.00-3.15 p.m.	NCERT – Its Roles and Functions	Dr. S.K. Yadav
3.30- 5.00 p.m.	Elementary Education: Status, Problems and Issues	Prof. K.K. Vashishtha
<b>22 May, 2002</b>		
9.30 –11 15	Value Education	Prof. S. Gulati
11.30- 1.00 p.m.	Emerging Issues and Concerns in Teacher Education	Prof. G.K. Lehri
2.00 3.15 p.m.	Qualitative Research in Education	Dr. A.K. Srivastava
3.30 –5.00 p.m.	Human Rights and Peace Education	Dr. Saroj Pandey
<b>23–24 May, 2002</b>	<b>Information Technology: Theory and Practice</b>	<b>DECETA</b>

25 May,2002		
9.30- 11.15	Teaching Skills	Prof. G.K. Lehri
11.30-1.00 p.m.	Continuous Comprehensive Evaluation	Prof. Mamta Agrawal
2.00- 3.15 p.m.	Culture Specific Pedagogy in Teaching	Prof. B.K. Mattoo
3.30- 5.00 p.m.	Visit-to Library	
26 May, 2002	Assignment	
27 May, 2002		
9.30-10.30 A.M.	Girls Education - and Women Empowerment	Dr. Gauri Srivastava
10.30-11.15 p.m.	Presentations by the Participants	
11.30- 1.00 p.m.	Innovations in Teacher Education	Prof. S. Nagpal
2.00- 3 15 p.m.	Grading System	Dr. Avtar Singh
3.30-5.00 p.m.	Constructivist Approach of Teaching and Learning	Dr. Santosh Sharma
28 May, 2002		
9.15-10.30 a.m.	Action Research	Prof. D.K Bhattacharjee
10.30-12.00 p.m.	Dr. L.M. Singhvi's Visit	
12.00- 1.00 p.m.	Roles and Functions of University	Prof. S.N. Singh
2.00 – 3.15 p.m.	Not by Competencies Alone	Prof. O.S. Dewal
3.30 – 5.00 p.m.	Visit to the NCERT Departments	
29 May, 2002		
9.30- 10.30 a.m.	Need Based Teacher Training	Dr. Raj Rani
10.30-11.30 a.m.	Organising Teacher Training Programme	Dr. D.D. Yadav
11.30-1.00 p.m.	Monitoring and Evaluating In-service Training Programmes	Dr. S.K. Yadav
2.00 – 3.15 p.m.	Educational Technology in School Education	Prof. R.L. Phutela
3.30 – 5.00 p.m.	Visit to CIET and viewing of video	DTEE & CIET

30 May, 2002

9.30-11 15 a.m.	Trends in Educational Research	Prof. M.S. Khaparde
11.30-1.00 a.m.	Inclusive Education	Prof. Neerja Shukla
2.00- 3.15 p.m.	Teaching Communication Skills	Sh. N. Khan
3.30 – 5.00 p.m.	Adolescence Education	Prof. Saroj Yadav

31 May, 2002

9.30- 10.45 a.m.	School Experience Programmes	Prof. S. Nagpal
10.45-11.30 a.m.	Presentations by the Participants	
11.30 1.00 p.m.	Teaching of Science and Technology	Prof. R.D. Shukla
3.30 P.M.	Valedictory Address	Prof. M.S. Khaparde Joint Director, NCERT

DLDI, NCERT



370.71 F23186  
NAT (N R)

